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Mind-body aspects of multiple chemical sensitivity, Part II:

A self-treatment plan

Part I of this article, which appeared in the Fall 1999 issue of *The Human Ecologist*, described the amygdala and its role in multiple chemical sensitivity. In Part II, I will describe ways to mitigate some of the troublesome symptoms that the amygdala can create, to gain a feeling of mastery over one's illness, and perhaps even to improve one's quality of life. Before describing this self-treatment program, however, I want to review some of the information contained in Part I.

HOW THE AMYGDALA PROTECTS US

The amygdala, an almond-shaped cluster of interconnected structures located above the brain stem, is the seat of our emotions, both pleasant and unpleasant. It also scans our memory bank to assess our surroundings for danger. If the amygdala perceives danger, it releases the neurochemicals that mobilize our fight-or-flight response. If we experience a trauma, the amygdala secretes extra amounts of these chemicals, emblazoning the event into our memory. This enables us to react more quickly to a similar situation in the future. In this way, the amygdala protects us.

WHEN THE AMYGDALA OVERPROTECTS

Normally, our fear and other reactions to a trauma lessen with time. However, if the trauma was extreme, repetitive, and/or accompanied by a sense of helplessness, the

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reactions may not. This gives rise to post-traumatic stress disorder (PTSD), a condition in which the individual “relives” the initial trauma through flashbacks that are often as intense as the original experience. These flashbacks occur because the amygdala is unable to distinguish between past and present. PTSD symptoms can occur in reaction to a real event (such as the one that produced the initial trauma) or to a different event with similar characteristics. The combat veteran who dives for cover when he hears a sudden, loud noise, such as a book dropped onto the floor, affords an example of the latter. I knew such a man, an ex-Marine, when I was in college.

MCS AND PTSD

Multiple chemical sensitivity is a physiological condition. It is not the same as PTSD. PTSD can, however, occur as a byproduct of MCS. Often, the initial exposure or exposures that cause an individual to become chemically sensitive, or the difficult period of adjusting to a new diagnosis of MCS, fit the definition of extreme or repetitive traumas accompanied by feelings of helplessness.

People who have PTSD feel extremely powerless and helpless because they no longer feel safe and in control of events or their environment. People with MCS experience a similar loss of safety and control. If you have chemical sensitivities, suddenly you perceive that the world is no longer safe for you: The air is not safe for you to breathe. The food that must sustain you is not safe for you to eat. Your usual medical professionals may not be able to help you. Trusted institutions may have misled you. Your loved ones may not believe you. Even your own body has betrayed you. You feel overwhelmed and powerless to combat all these forces. The result is that many people with MCS can also develop PTSD.

Here's what can happen: A person with MCS who was traumatized when the disease began encounters a smell which in and of itself may or may not be toxic. The amygdala quickly scans its

memory bank, determines that the smell is very similar to that of a previous exposure that actually was toxic, and sends a danger signal that triggers a reflex reaction. The symptoms may, of course, be caused by a substance that is truly toxic. However, since the reaction takes place before the cognitive brain can analyze the incident, it is possible for a person whose MCS is complicated by PTSD to have familiar symptoms from an exposure that may not in and of itself be toxic — due to the chemical secretions triggered by the amygdala's response to the supposed toxin.

These are the same chemicals that produce brain changes that create the sometimes inappropriate emotional reactions that can cause people with MCS to appear “psychiatric” to others who do not understand the illness.(1) These chemicals can also damage the brain, either temporarily or permanently, causing memory loss, loss of cognitive functioning, lowered immune response, and a lowered exposure threshold to the toxic substance that provoked the reaction.(2) The threshold can, in fact, become so low that the recorded toxin is in parts per billion, often too low to be smelled by a person who is not chemically sensitive (or even the person reacting to it.)

A SELF-TREATMENT APPROACH FOR SYMPTOMS

The bad news in all this is that once your emotional system learns something, you never let it go. The good news is that there is help. The rational, cognitive brain can achieve control over the irrational amygdala.

I have found a way to obtain a degree of mastery over PTSD — even the PTSD that occurs as a complication of MCS. It is based on the way the amygdala and its extension complex operate. It also comes from 25 years of clinical experience treating all types of trauma victims, as well as persons with MCS (including myself). I must emphasize at this point, however, that what I am about to propose must not be misconstrued as a cure. It is not a substitute for avoidance, proper medical

treatment, and careful living.

The approach that I use is to strengthen the brain's cognitive centers and use them to reeducate the brain's emotional centers, which make up the amygdala. This approach has three stages:

1. Attaining a sense of mastery.
2. Obtaining the safe state necessary for reeducating the amygdala.
3. Mourning the loss of one's old lifestyle in order to evolve a new one with new, realistic goals.

Even though the presence of a knowledgeable and trained professional can be very helpful, much of the work in the above three steps can be done by an individual working alone.

STAGE ONE: GAINING MASTERY

The way to attain a sense of mastery is to learn as much as possible about MCS and also about the workings of the amygdala. Read, talk with as many knowledgeable people as possible, join support groups. Dismiss and/or avoid those who believe that MCS is not real or is “purely psychological.” MCS is real. It is a chronic illness, it has a cause and a course, and it can be successfully managed.

It is important to understand salient points about the amygdala: that its primary function is to protect us; that a traumatized amygdala cannot differentiate between truly dangerous situations and those that merely resemble dangerous situations; that the amygdala acts with such speed it bypasses reason; that it cannot differentiate between present and past. This knowledge is useful when the work of reeducating the amygdala begins.

STAGE TWO: OBTAINING A SAFE STATE

It is in states of safety and calmness that the amygdala can best be reeducated. We achieve safety through knowledge and through lifestyle changes that give us some control over the exposures that cause reactions. We can achieve calmness and slow down our emotional responses by practicing any one of a number of disciplines (meditation, massage, exercise, self-hypnosis, yoga). The choice is yours; do whatever feels right for you. The important thing is that you practice the chosen

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discipline in such a way that it becomes part of your life and something you can use in situations where you must reeducate the amygdala's emotional centers.

Personally, I use a breath meditation. I set aside two 15-minute periods a day, sit quietly, and focus on my breath. I experience my breath as it goes in and as it goes out. I pay attention to it. When other thoughts come into my mind, I notice them and then bring my attention back to my breath. I remind myself that there is no place I need to go, nothing I need to achieve. The purpose of this is to calm the body, to calm the system, to get used to being in a calm, meditative state. Once you learn that you are repeatedly able to achieve a state of meditative calm, you will be able to go back there quickly whenever you need to.

I also practice self-hypnosis. I have been trained in a variety of self-hypnotic techniques. However, anyone can learn to hypnotize himself or herself. You will find the names of books on self-hypnosis in the "Resources" section at the end of this article.

When you encounter a possible toxic exposure, it's important to have this calm, safe state in one's arsenal in order to deploy the cognitive functions of the brain. First, you use your proven technique to calm yourself down. Then, you assess the situation rationally and determine what you should do, before you act. If you determine that the situation you are in is harmful, you then remove yourself from it, but in a calm, meditative state instead of the anger and panic that create damaging reactions from internal chemicals.

The person who does this long enough might begin to notice that not all odors make him or her sick, that some are simply smells, pleasant or unpleasant. One may still choose not to be around a particular odor, but this can be accomplished without panic, fear, anger, or embarrassing or disgracing oneself through actions that appear inappropriate.

For Dave, my ex-Marine classmate, it was important for him to realize that the loud noise that caused him to dive for cover was a book dropped on the floor, not a bomb. He had to go over this again and

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again in his head, with help from his friends. The more he did this, the less intense his reaction became and the more he could think of the sound as simply an unpleasant noise.

My post-traumatic-stress patients find it helpful to talk to another person about the event that caused their trauma as many times as they need to and to remember it as it happened. By talking about it, they gain mastery over it. Some even have to relive it, in all its emotional intensity, in my office.

Telling another human being about the horror of an experience — and having that other human being believe you — is helpful in many ways. Doing this causes the release of healing hormones and neurotransmitters into the blood stream and desensitizes the amygdala. We all know that it feels good to tell another person about a tragedy and feel believed and understood. If a friend is not available or understanding, a therapist familiar with the problem might be necessary.

IMAGERY

The other technique to practice in a safe situation is the use of imagery to slow or stop the production of the internal hormones released by the amygdala that cause the reaction and damage the brain. I use this technique when I am in a situation that my body tells me is toxic but that I cannot get out of as quickly as I would like. First, I use self-hypnosis to put myself into a

light trance. A trance is a powerful state. It allows access to the unconscious. In that state I then do a number of things to help myself heal.

First, I "talk" to my amygdala in my mind, as if it were a person separate from me. Since it is a primitive organism that has sensed danger, I treat it as I would a terrified little child. I tell it that I know the situation is not good and that I will get out as soon as possible. I tell it that it does not have to react as fast as it does and suggest that it slow this reaction process down.

Then, I imagine my chemical-secreting glands closing down. I imagine their secretions lessening and then draining off, like a rushing river that is slowed. Finally, I visualize myself turning off the valves that allow the chemicals loose into my blood stream. In this way I try to slow, if not stop, my internal chemical reaction.

This is how I have been able to slow my responses and reeducate my brain. This is something you can do, also. You can achieve calmness in your life through meditation, yoga, or another chosen discipline. You can learn to use this discipline to calm yourself in the presence of an exposure that may be toxic. You can learn to slow your body's responses to the situation and retain your self-control.

STAGE THREE: MOURNING, THEN MOVING ON

It is important to accept the fact that MCS is a chronic illness. If you have it, aspects of your old lifestyle are gone forever. This is a great loss. As with any loss — for example a death in the family — it must be mourned. Your minister, priest, rabbi, or other spiritual leader should be able to help. One can also mourn through therapy. For information on the grief process, see *On Death and Dying*, by Elisabeth Kubler-Ross.

Successfully mourning a loss leads to lifestyle changes that allow the individual to gain control of his or her life with a feeling of mastery over the illness. For example, I have accepted that certain relatives and friends do not believe that MCS — and my MCS — is real. I mourned the loss of their friendship and belief in me. Then I found other friends.

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And I joined a support group. In this group, I talk about my injury and my reactions, listen to other people's stories, hear how they handle their illnesses, and I share how I handle mine. In this way, I regain the support and understanding that I lost. On my own, I continue to experiment with various techniques for imagery and for reeducating my brain. I write about them, in the hope that my writing might help others. From this work I feel productive and good.

Using these methods, I have been able to gain control over my illness, increase my functioning, and evolve a new lifestyle.

(1) It is interesting to note that in anecdotal surveys of more than 400 people with MCS who were asked to rate treatment modalities they had tried according to their effectiveness, psychological interventions showed very limited, if any, success. (See studies by Allison Johnson (Survey Results from 351 Respondents, MCS Information Exchange, Brunswick, Maine, 1997) and by DePau University (Treatment efficacy: A survey of 305 MCS patients, *The CFIDS Chronicle*, Winter 1996).)

(2) This phenomenon, called "kindling," has been demonstrated by a number of researchers. See Bell and Cain in the following Sources list.

Gunnar Heuser, M.D., has documented physical changes in the amygdala of individuals diagnosed with MCS using PET scans. (Personal communication.) ■

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RESOURCES

The following are some books and tapes that teach relaxation, meditation, or self-hypnosis. There may also be professionals in your community who teach these skills. Most people can learn them in two or three sessions.

■ Berger, Caprio. *Healing Yourself with Self-hypnosis*. Paramus, N. J.: Prentice Hall, 1998.

■ Hay, Louise. *Meditation*. New York: Hampton House, 1998.

■ Hewett, William. *Self-hypnosis*. St. Paul, Minn.: Llewellyn, 1998.

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■ Borysenko, Joan. *The Power of the Mind to Heal*. New York: Simon and Schuster, 1994.

■ Kenyon, Tom, and Paul Overman. *The Ultimate Brain*. New York: The Relaxation Co., 1997.

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