



“When you change the way you look at things, the things you look at change”

-Wayne Dyer

Depression is one of those things that, as a society, we don't like to talk much about. In spite of the fact that almost 19% (that's about one in five people) of the US population over 18 are affected by some type of depressive disorder, it still does not get the recognition or media attention it deserves. It is still perceived as some flavor of personal weakness, lack of character, or a simple anti-depressant deficiency.

According to a recent BBC report based on epidemiology collected by the World Health Organization, depression and its related effects are set to become the second largest killer after heart disease by the year 2020. It is interesting to note that depression also plays a significant role in coronary artery disease. Currently, suicide is the 11th leading cause of death for all ages and both sexes, the 3rd leading cause of death for 15 to 24 year olds and the 6th leading cause of death for 5 to 14 year olds. This becomes particularly alarming when we consider the rate of depression in those under 18 grows at a rate between 23-25% per year. The pharmaceutical industry has targeted preschoolers as their largest, swiftest growing market for anti-depressants, anti-anxiety drugs and

anti-psychotics. Unfortunately, data suggests that these drugs given to people of that age can do more harm than good, actually provoking suicide or suicidal thought. Undoubtedly we have quite a large problem on our hands. What can we do about it? Well, a good place to start is to have a conversation about it and bring it out into the light.

The causes of depression can be simple or complex, arising from biochemical imbalances, nutrient insufficiencies, low blood sugar, other medical conditions, life circumstances or even your personal belief system. Most commonly, it is a combination of many factors. In order to most effectively treat depression, we must be able to intelligently tease out contributing biochemical, nutritional and situational factors, as well and identify any dysfunctional, stress-inducing personal belief systems.

Conventional Approaches to Depression

Typically, depression is treated with anti-depressants, anti-anxiety or anti-psychotics to start with, perhaps with some cognitive behavioral therapy and/or psychoanalysis in conjunction with

these medications or recommended at a later time. When one drug is initiated, it is given a trial period to build up in your system and to see how it manages your symptoms. If symptoms are unchanged, the dose is increased. If, after several weeks to months, symptoms still remain unchanged, another drug is layered on, and another, and so forth. The run-of-the-mill SSRIs and SNRIs have a success rate (meaning they reduce symptoms of depression) of about 30-40% - just as good, or slightly better than placebo. Now, for those people, these drugs can literally be a lifesaver and return them to their normal day-to-day activities. But if this were the norm, rather than the exception, I would expect we would live in a dazzling, happy society.

Depression and Nutrition

Food is information. It provides the building blocks for all of the cells in our body, all of the hormones, enzymes and cofactors needed to catalyze biochemical reactions. It tells our genes which proteins to code or not code for. Food can tell our genes to be in an inflammatory, pro-aging state or the reverse. We truly are what we eat. A thorough

discussion of nutrition and depression is beyond the scope of this article, but let's outline the basics. The most important thing when we think about depression and nutrition is to make sure that the blood sugar is stable. When we get on the so-called blood sugar roller coaster, using caffeine and sugary foods to boost our energy, followed by the inevitable crash, we are setting ourselves up for a low mood. Once we get into low moods, it becomes difficult to get out. Once we're truly depressed, we certainly lack the motivation to take care of ourselves through food, so in order to bypass this completely it is wise to keep blood sugar stable. This entails eating every three to four hours and incorporating protein and fiber into each meal or snack. Emphasize fibrous, watery veggies like broccoli, kale, collards, spinach, etc over starchy veggies. Minimize the use of refined carbohydrates like cookies, crackers, breads and pastas. Alcohol readily depletes B vitamins, which are important for mood and energy production, and thus should be used moderately. People who are depressed have an increased need for B vitamins, which are depleted also through increased stress and are a cofactor for the synthesis of neurotransmitters and many of the "feel good" hormones that readily combat stress and depression. Vitamin B12 is particularly energizing to the brain and can be low in people who are taking proton-pump inhibitors or H2 inhibitors like Prevacid and Prilosec and also in the vegan and vegetarian popula-

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tions. People who are depressed should also have their Vitamin D status checked as this vitamin plays a significant role in emotional well-being and also seasonal affective disorder (SAD). Fish oil also plays a part in easing mild depression as it sensitizes dopamine receptors and is extremely nourishing to the brain and improves nerve conduction. Most people who take fish oil take far too little of it, however. Most people should be taking several grams daily. A more individualized, tailored plan is easily created with your healthcare provider as you identify potential "trouble areas" in your diet, neurotransmitter imbalances, and other concomitant disorders that could be contributing to your symptoms, such as hypothyroidism or even sleep apnea.

Depression and Neurotransmitters

Neurotransmitters are the chemical messengers that speak to the brain. They are also slightly misnamed because there are receptors for them all over the body, not just in the brain. This simply underlines the fact that the body and mind are indeed inseparable. Most people are familiar with the neurotransmitter serotonin, because this compound is the most heavily targeted in anti-depressant therapy. There are many, many more neurotransmitters and hormones that can affect brain chemistry and ag-



gravate depression – it's not always about serotonin. An astute clinician will be able to help you identify other neurotransmitters you could be having a problem with based on your symptoms. Neurotransmitters work together, as in a symphony, to create harmony in the body and the brain. When one hormone is off-key, that can create disturbances in the whole system. No hormone or neurotransmitter acts in isolation, and they all have different jobs, though some of their functions overlap. Included below are three of the most important players when we talk about depression and neurotransmitters: serotonin, dopamine and GABA. Keep in mind depression can be caused by an imbalance of one or all of these, plus other factors as well.

Serotonin

Responsible for the synchronicity of body and mind, serotonin confers to us the ability and desire to play, the love for excitement and activities just for the sake of them. When we have the desire to go skydiving or do something to give

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us that flush of excitement, serotonin is speaking to us. Serotonin loves to party.

Depression caused by an imbalance of serotonin (too much or too little, both are possible) is classically characterized by loss of enthusiasm for favorite things – you don't enjoy your favorite foods, and you may make up for enjoyment with quantity by overeating. Serotonin plays a role with cravings, and you may find cravings for certain foods and especially alcohol increasing. You also don't want to be around your favorite people or do your favorite things. You may find yourself actually hating those very things. Sleeping may become difficult, but you find yourself craving more and more sleep as you become less and less rested. Physical symptoms are common and likely and they can include chest pain, shortness of breath, skin breakouts and sexual dysfunctions such as loss of libido and erectile dysfunction.

Dopamine

Dopamine enables us to have quick wit and a sharp mental focus. It helps us to set goals and keep an eye on the prize, sustaining our motivation. Dopamine is often called the student's hormone as it keeps us engaged not only in

our mental pursuits but in life as well. This neurotransmitter allows us to be rational and to sort through facts and make decisions. It helps us to feel empowered and in control. When you have to give a presentation at work, and you nail every point, communicating effectively and able to answer all questions posed to you, thank dopamine for helping you prepare, execute with confidence, and hit it out of the park.

Depression related to a dopamine imbalance begins as physical fatigue and mental sluggishness – a literal slowing of the body and mind. You may notice you are not thinking as quickly or as clearly as you usually do, and that can make you irritable or even aggressive. Since you don't feel at the top of your game, you may begin to procrastinate. You may find yourself isolating yourself and disengaging from your life. If someone confronts you with this, you may fall apart or attack. This then makes you feel hopeless and worthless and you further isolate and disengage. Cravings for nicotine, sugar and simple carbohydrates can increase. Indulging in these foods can cause blood sugar highs and lows, characterized by lightheadedness and even tremors. You may notice that

you are constipated, even though you've never had a problem with that before. When there is a dopamine imbalance, cortisol is affected, creating high blood pressure, rapid weight gain around the middle, obesity and increased feelings of stress. Thyroid conditions are also common, notably hypothyroidism.

GABA

GABA is an inhibitory neurotransmitter, helping us to calm down and unwind from the day, and start each day fresh and anew. Its major functions are mental stability, follow-through and being responsible. It is extremely helpful in dealing with stress and keeping us from getting frazzled. GABA helps us to organize projects and activities, stay on a schedule, and be organized. Since GABA is a calming, inhibitory neurotransmitter, it can help control other more excitatory ones.

Depression caused from an imbalance with GABA will create increased anxiety, mental agitation and irritability. Your mind will not and cannot settle, and jumps from one issue to the next, unable to find resolution for any problem you are able to identify. You may begin to notice you are sensitive to odors or have an increase in allergies and respiratory problems that had never troubled you before. You may experience blurred vision, new fears and phobias, and a complete inability to settle both physically and mentally. You may start to get night sweats and reflux. All of these symptoms can be associated with an imbalance of GABA.

Luckily for us, most imbalances of neurotransmitters are readily corrected through consistent dietary changes and specific nutrient repletion of the building blocks of and cofactors for neurotransmitter synthesis, along with sensitization of appropriate receptors.

Depression and Exercise

No discussion on depression would be complete without the concept of exercise as an anti-depressant. In fact, one could argue that exercise is one of the most powerful treatments for and prevention against depression. There are piles upon piles of clinical data indicating that exercise outperforms pharmaceutical and placebo interventions for de-



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pression, even major depression. These positive effects are seen in basically all forms of exercise, including walking, weight training, burst/interval training, yoga and pilates, and cardiovascular exercise. Understandably, many who are depressed lack the motivation to get out there and walk or hit the gym. In some cases, biochemistry may need to be balanced first. In other cases, people may be sufficiently motivated to exercise. Even several minutes a day, walking to your mailbox and back, can be extremely helpful. As you begin to feel better, you will be able to do more, and will feel even better in a positive feed-forward cycle.

Depression and Underlying Beliefs

Perhaps the most elusive causes of depression are the very beliefs that we hold. These are beliefs that we innocently and unconsciously hold, and they become our dogmas and exert a very negative influence. They are elusive because they are unique to each person, and you may not even be aware that you have these beliefs. And of course, there isn't really a conventional or standard way to "treat" them. Awareness, however, is extremely useful. As we become aware, we are able to control our reactions to these negative thoughts and beliefs. So what are some underlying beliefs we may hold? See if any of these resonate with you: "I'll be happy when I have money/am skinny/get the relationship I want/get the job I want"; "People should like me"; "People should be nice"; "I never have enough"; "I am not good enough"; "I could have done better"; "My mother/father/partner should love me"; "Life is unfair"; "I am a victim". It seems that we are always pinning our happiness to the past, looking for it out in the future, or expecting someone else or some certain situation to give it to us. Who taught us these beliefs? How did we become servants to them? If we think our happiness is the responsibility of anyone other than ourselves, we are essentially abandoning ourselves and becoming a slave to whatever person, situation or object we think is going to make us happy. This certainly sounds like a recipe for depression, as anyone living in this world will tell you, things hardly ever work out exactly the way we think they should or plan them to be. Wouldn't it be far easier to skip

the person, situation or object, and just be happy now? Or, we think that some event or person in the past has robbed us of our happiness. A traumatic event, or the loss of someone we love. We must ask ourselves, what are these stories doing to us? Are they helping us or hurting us? Do they serve us? Do they aid in our emotional freedom? Please ask yourself these questions, sit and be quiet with them, and see what comes up for you. Be gentle with yourself. It is not about right or wrong, but about being a happier, more functional human being.

Depression and its associated symptoms are extremely prevalent in the developed world and are poised to lead to more deaths than cancer in the United States within the next decade. Despite this alarming tidbit, depression largely remains a taboo subject and treatment for depression remains woefully inadequate. It is time for us to take a hard, fresh look at depression and continue the conversation about treatment. Let us bring our dark clouds into the light, not only for our own sake, but also for the sake of coming generations, who are most at risk. There are a myriad of causes of depression, multiple forms of expression of symptoms, and unique and individualized ways to approach this "dis-ease". Nutritional and lifestyle factors must be explored and, if needed, corrected. More intensive exploration into our underlying belief systems and repetitive negative thoughts may be necessary, and, in fact, the most permanent and powerful type of cure. It takes a lot of courage to face our internal demons, but once we take that step we may be surprised to find that where we thought we would see pain and darkness we see only kindness and unconditional understanding.

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Dr. Teta will be a guest speaker at the Natural Triad Health & Wellness Show on Saturday, April 10 at 11:00 AM. Details on page 32.

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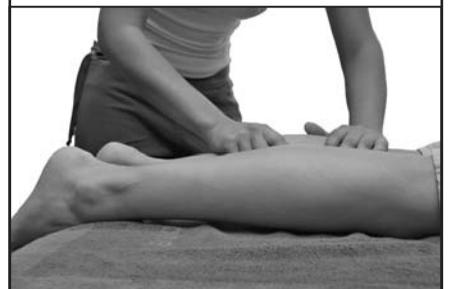
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