



Understanding Depression & Anxiety

There has been a great deal of new information concerning depression with associated anxiety and their potential causes and options for treatment. This handout is made in an effort to explain in a little more detail this new information. When you are done reading you may want to share this with your family or significant other so that they may understand a little more about the science behind depression and anxiety.

Research in the field of depression is ongoing and we continue to learn more. Currently there are several theories to explain what may be happening in the brain to those with depression and anxiety. These theories are supported by research in the study of neurotransmitters or neurohormones. You may have heard the phrase ‘chemical imbalance.’ I like to avoid that ‘chemical imbalance’ phrase since it implies a ‘chemical’ and an ‘imbalance’ which frequently makes one picture someone on chemicals and leaning way to one side.

Transmission of information occurs at the cellular level in the brain. Information is sent to the brain via nerve cells. These cells communicate with each other by sending signals or neurotransmitters with packets of information. You may have heard of serotonin or dopamine, which are examples of the many neurotransmitters in the body. The point to understand is that stressors or chronic stress can contribute to a low number of neurotransmitters. Research has also shown that as the stress increases, the concentration of neurotransmitters decrease and the protective factors in the brain are reduced. This reduction in neurotransmitters makes the cells vulnerable to neurotoxic effects and nerve cell function continues to decline. Thus, the ability for nerve conduction and communication in the mood center of the brain are affected and resultant symptoms of depression and anxiety occur.

We could compare this process to diabetes. We know that diabetics lack insulin, an important hormone needed to control a person’s level of blood sugar. Many believe that people suffering from depression or anxiety can control it with ‘thinking’ correctly or using brainpower or positive thinking behaviors. Not to belittle positive thinking, but we do not expect people with diabetes to control their blood sugars by ‘thinking positive.’ Both diseases require a treatment aimed at supplementing or increasing the levels of hormone needed to treat the illness.

There are several treatment options that are used on their own or in combinations. For example, exercise increases endorphins that increase nerve cell function. These endorphins help the neurotransmission and stimulation of the mood centers in the brain. Nutritional supplements are another treatment option. They increase the concentration of

necessary precursors that nerve cells need to manufacture these neurotransmitters. Each of these options has varying effects depending on the individual. They also seem to take longer to work. In conjunction with other treatment methods they can be very helpful.

Medications are also an option. The new prescription medications are all similar but each has its own special characteristics and side effects. These medications are non-addictive and usually very effective. Studies have shown that their maximum effect takes up to 6-8 weeks to reach; so dosing changes should only be made after being on them for at least this long.

Together with exercise and eating properly, these medications help treat this physical depletion of neurotransmitters that contribute to anxiety and depression. These interventions help improve and stabilize moods, therefore relieving the symptoms of depression and anxiety. This is especially helpful for those who are suffering from situational stress such as the death of a family member, relationship problems or stressors at work. It is very important to note that studies show if one continues to fall back into the depths of depression after completing treatment, they should continue with that treatment for a longer period of time.

Just like the hereditary tendencies with diabetes, there are also those who have a hereditary pattern with neurotransmitter depletion that cause depression and anxiety. These individuals often must be on a long-term medication regimen to prevent relapse or reoccurrence of mental illness.

I hope this discussion has been helpful. Remember that there are multiple ingredients to the potential causes of depression and anxiety. Likewise multiple treatment options exist and have to be tailored to the specific individual and situation. The treatments work to increase the low concentration of certain neurotransmitters in the brain and thus improve the moods. This alleviates the symptoms associated with depression. It is an actual physical disease with hereditary tendencies and like diabetes requires treatment beyond mental thinking. With proper exercise, nutrition and medication one can be successfully be treated and return to an active, meaningful life.