



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 efforts 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 sometimes referred to as 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.

At the cellular level in the brain there occurs a transmission of packets of information. These are carried by the nerve cells. These cells communicate with each other by sending 'signals' with these packets or neurotransmitters. There are several you may have heard of such as 'serotonin and dopamine,' and there are several others. The point to understand is that stressors or chronic stress affects these neurotransmitters. The stress causes low levels of neurotransmitters. Research has also shown that as the stress increases then concentrations of not only neurotransmitters decrease but also protective factors in the brain decrease as well. This 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 centers of the brain are affected and resultant symptoms of depression and anxiety occur.

Depression and anxiety are thus actual physical and pathological depletion of important neurotransmitters. Just like diabetes in a way. We know that diabetics lack insulin, and 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 behavior. 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 which are used on their own or in combinations. Exercise for example increases endorphins which 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. But 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 uses with its own kind of 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 like diabetes help treat this physical depletion of neurotransmitters. They help improve and stabilize moods, relieving the symptoms of depression and anxiety. This is especially helpful for those who are suffering a transitory stress such as the death of a family member or stresses at work or in a relationship. Studies show though that if one continues to fall back into the depths of depression after treating the depression that they should continue with that treatment for a longer period of time.

There are also those who have a hereditary pattern with neurotransmitter depletion, just like diabetes and the hereditary tendencies with that disease. They often have to be on treatment long term to keep them out of depression and anxiety.

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 that specific individual and situation. The treatments work to increase the low concentration of certain neurotransmitters in the brain and thus improve the moods and alleviate 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 treated and return to an active, meaningful life.