

The Science Behind Depression

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EDITORIAL

Depression has been the leading mental disease for almost a decade now. This form of mental illness holds the capacity to kill the patient as the patient develops habits of self-harm. It is estimated that nearly 800,000 patients lose their lives every year globally due to suicide which comes up from the disease of depression. Depression in the present is a matter of grave concern for hundreds of families, while some don't even think of it as a disease and tend to ignore it. The need for family and peer sympathy in such cases is extremely high but the fact that most of the families are unaware of it cannot be denied. Depression is defined as a mood disorder caused mainly due to genetic problems, hectic life, or improper medication. To understand the complexity of depression, it is recommended to understand the science behind it. Understanding, depression, will help us to understand that how through the mode of biological science we all are controlled. Starting from the fight we do with our near once to the tranquillity we feel in the dawn are all controlled by our body and nothing else.

Researchers have used modern technology to identify the science behind depression positron emission tomography (PET), Functional magnetic resonance imaging (fMRI), and Single-photon emission computed tomography (SPECT) were used to identify the working of the different parts of the brain during phases of depression. The study revealed that hippocampus size plays a major role in the development of depression. Patients suffering from depression have a smaller size Hippocampus of approximately 9 to 13 %. It was also understood that the amygdala and thalamus are also

responsible for the cause of depression. Apart from the physiological part, the actual cause of depression was the improper transfer of neurotransmitters from one neuron to another. This fact brings in a topic of debate. If insufficient neurotransmitters are the main cause of depression, then why antidepressants don't start working immediately? The answer to this uncovered the fact that improvement of mood only occurs when the nerve fibers make new connections by growing. This process takes time and does not occur immediately thus it takes time for depression phases to go away. Chemicals that are responsible for depression are Serotonin and Norepinephrine. The former is responsible to make us active and alert while the latter is responsible for making us feel better. The insufficient presence of both these chemicals does not allow the patient to focus on any work and creates a feeling of reluctance. A genetic study has changed the scope of life-science and is bringing up many mysteries to light in the recent era. Genetic study related to depression has also been done and a relation between certain gene and depression has already been established. The fact that genetic therapies to treat depression are yet a dream cannot be denied. They believe that research and awareness programs will reduce cases of depression will make society stronger and better.

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