

NEGATIVITY: IT'S ALL IN THE MIND

Any fluctuation in the levels of dopamine and serotonin can lead to myriad health problems - from depression and anxiety disorders to greater impulsivity

Have you started feeling depressed or moody while in love, lacking focus or motivation to finish a task at work or finding yourself addicted to shopping or even gambling? Do not just blame sudden impulses or your stars as the acts of such devastating behaviour are two key naturally

occurring chemicals in your brain: dopamine and serotonin. While dopamine helps keep our mood in a balanced level so that we avoid depression, serotonin leads a vital feel-good hormone - important for calmness and emotional well-being and is responsible for enhancing confidence levels.

Any fluctuation in their levels can lead to myriad health problems - from depression and anxiety disorders to greater impulsivity and even hallucinations and suicidal thoughts. "When these key neurotransmitters become volatile, there is rapid mood imbalance. It leads to a rise in depression and, over a period of time, can be clinically dangerous," said Dr Mohitish Bhatnagar, director (neurosurgery) at Maxima's Nizam's Super Specialty Hospital.

According to Dr Madhavi Bekari, director (neurology) at Fortis Fk. 11 Rajas Ideal Hospital, serotonin is the happy neuro-transmitter and when its levels go down, we feel low and depressed. Dopamine receptor, on the other hand, triggers complex and has two classes. When the levels of Class 1 (D1, D2 and D3) receptors go down, one experiences symptoms of Parkinson's disease. "When levels of Class 2 receptors (D4 and D5) go high, one gets symptoms of psychosis where the person becomes agitated, cannot sleep, believes that people are

up to harm him or her family, wife/husband is having extra-marital affair and hallucination," said Bekari. A study led by Robb Rutledge at University College London and published in the *Journal of Neuroscience* last year found that increasing dopamine levels in healthy adults led participants to choose more risky options in a gambling task.

The findings revealed that participants took more risks to try to get bigger rewards after receiving dopamine but not a placebo. Dopamine is involved in reward learning and previous research has linked dopamine drugs with compulsive gambling problems in people with Parkinson's disease. When it comes to serotonin that regulates mood, appetite, sleep and also impacts cognitive functions including memory and learning, increased levels can cause vasoconstriction (constriction of blood vessels which increases blood pressure) and contributes to migraine.

"Large amounts of serotonin are also secreted by carotid tanours, resulting in flushing (of the skin, usually of the head and the upper part of the torso)," said Dr Keki Tuli, consultant neurosurgeon and co-head, department of neurosurgery, Maxima Hospital.

The healthy levels of both neuro-chemicals are affected by our changing lifestyle, so tweaking the way we live can help us get back our optimism levels.

"Exercise, especially ancient practices of pranayama and yoga, can go a long way in ensuring balanced levels of the two important neurotransmitters," Bhatnagar advised. When our thoughts are judgemental or critical, the brain chemicals affect our immune system in a negative way. And when our thoughts are loving, empowering and positive, the neurotransmitters enhance the immune system.

"Science is confirming that our negative thinking is killing us. Joy and sorrow are all creations of the mind. Peace is within you and what's strange is that it stays right where restlessness, anger and resentment reside! You can control your thoughts with mindful meditation and positive lifestyle," explained Dr Rajiv Arora, director (neurology) at the BLK Super Specialty Hospital. At

times, anti-depressants and other medication can affect healthy levels of both brain chemicals. "There are some people who are genetically pre-disposed to having high or low levels of these neurotransmitters, leading to Parkinsonism and schizophrenia," Bekari noted.

In a nutshell, enjoy life, eat and sleep well and give society an early retirement to keep your mood and confidence levels up. **WE**

