NEUROPLASTICITY
The Ability of the Brain to Reorganize Itself, Both in Structure and How It Functions

HOW THE BRAIN CHANGES

NEUROGENESIS
Continuous generation of new neurons in certain brain regions

NEW SYNAPSES
New skills and experiences create new neural connections

STRENGTHENED SYNAPSES
Repetition and practice strengthens neural connections

WEAKENED SYNAPSES
Connections in the brain that aren’t used become weak

NEUROPLASTICITY CAN TAKE PLACE WHEN CHANGES OCCUR IN:

Characteristics of Dendritic Spines

Properties of Membrane and Ion Channels

Hormonal Activity

Microglia Activity

DNA Regulation and Transcription

Neurotransmitters
NEUROPLASTICITY CAN RESULT FROM:

- Traumatic Events
- Stress
- Social Interaction
- Meditation
- Emotions
- Learning
- Paying Attention
- Diet
- Exercise
- New Experiences

THE BRIGHT AND DARK SIDES OF NEUROPLASTICITY

Neuroplasticity makes your brain resilient. Neuroplasticity enables you to recover from stroke, injury, and birth abnormalities. You can learn new ways of being and responding to conflict. In many cases, you can also overcome depression, addiction, obsessive compulsive patterns, ADHD, and other issues.

Neuroplasticity means the brain is always learning. But the brain is neutral - it doesn’t know the difference between good and bad. It learns whatever is repeated - both helpful and unhelpful thoughts, actions, and habits. Therefore neuroplasticity may entrench depressive, anxious, obsessive, and over-reactive patterns.