THE SCIENCE OF GRATITUDE

“Neurons that fire together wire together”
Gratitude

Gratitude is an antidote to negative emotions, a neutralizer of envy, hostility, worry and irritation. It is savoring; it is not taking things for granted; it is present-oriented.
The more you practice gratitude

- the more you strengthen the brain’s neural circuits for gratitude, making it easier to focus on feelings of gratitude
Increased Dopamine and Serotonin

- Functions
  - Reward (motivation)
  - Pleasure, euphoria
  - Motor function (fine-tuning)
  - Compulsion
  - Perseveration

- Dopamine Pathways
  - Frontal cortex
  - Striatum
  - Substantia nigra

- Serotonin Pathways
  - VTA
  - Nucleus accumbens
  - Hippocampus
  - Raphe nucleus

- Functions
  - Mood
  - Memory processing
  - Sleep
  - Cognition
Activation of Brain’s “Altruism” and Reward System Regions

“Thinking about Thinking”
Higher Reasoning
Executive Function

Prefrontal Cortex
9 Functions of the Prefrontal Cortex
1. Empathy
2. Insight
3. Response Flexibility
4. Emotion Regulation
5. Body Regulation
6. Morality
7. Intuition
8. Attuned Communication
9. Fear Modulation

Limbic Brain
1. Fight, flight, freeze stress response
2. Thinks, "Am I safe? Do people want me?"
3. Emotions live here

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8 Ways to Express Your Gratitude

- Gratitude Journal
- Gratitude Letter
- Count things you are grateful for in each room of your house
- Listen to guided gratitude meditation
- Start meetings with “what went well” one sentence reflection
- Savor receiving thanks
- Take a daily photo of something you are grateful for
- Try a gratitude jar or tree