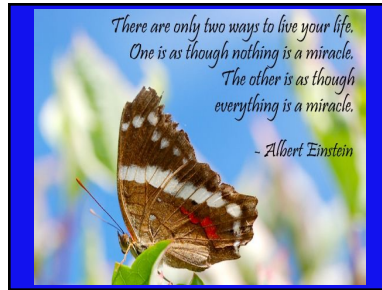
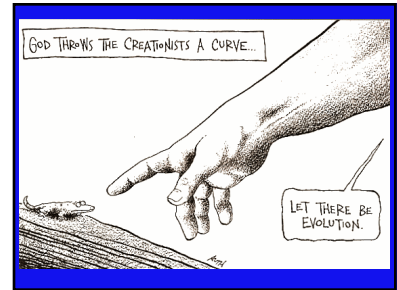


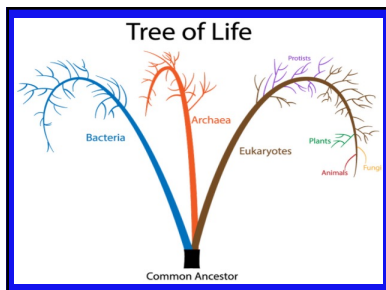
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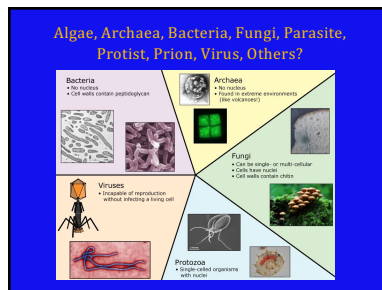
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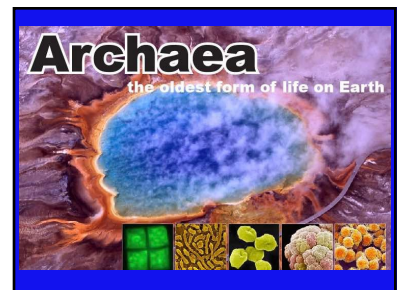
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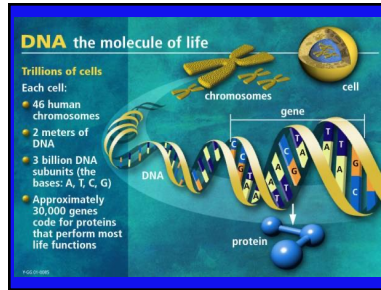
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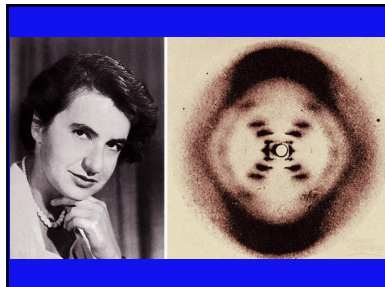
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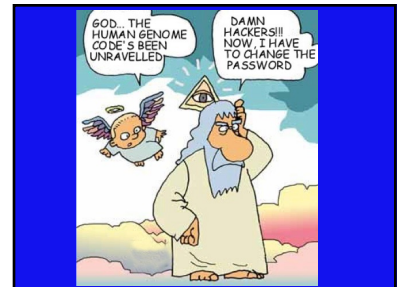
13

The Genetic Code

The figure below shows the genetic code table in mRNA codons, shown 5' to 3'. For each of the triple base sequences provided, click on the appropriate codon in the table.

		Second letter				
		U	C	A	G	
First letter	U	UUU Phenylalanine UUC UUA Leucine UUG	UCU Serine UCC UCA UCG	UAU Tyrosine UAG Stop codon UAA Stop codon	UGU Cysteine UGC UGA Stop codon UGG Tryptophan	U C A G
	C	CUU Leucine CUC CUA CUG	CCU Proline CCC CCA CCG	CAU Histidine CAC CAA CAG	CGU Arginine CGC CGA CGG	U C A G
	A	AUU Isoleucine AUA AUG Methionine start codon	ACU Threonine ACC ACA ACG	AAU Asparagine AAG AAA AAG	AGU Serine AGC AGA AGG	U C A G
G	GUU Valine GUC GUA GUG	GCU Alanine GCC GCA GCG	GAU Aspartic acid GAC GAA GAG	GGU Glycine GGC GGA GGG	U C A G	

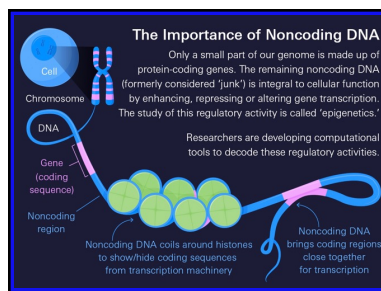
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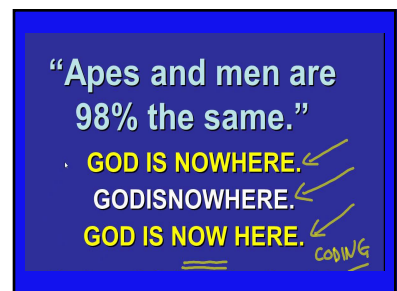
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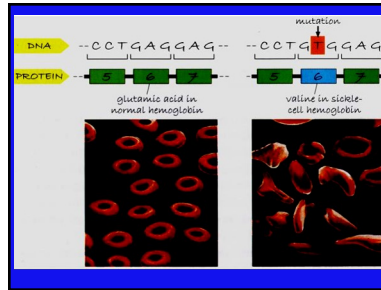
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What we know about the genome

More than 99% of these genes are identical in humans. The rest are what make individuals unique.

Total number of genes in the human genome: **approx. 20,000 to 25,000**

Genes linked to disease: 5,000	Genes currently understood: 10,000
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Source: National Library of Medicine

21



22

Researchers have developed a way to use DNA as digital storage.

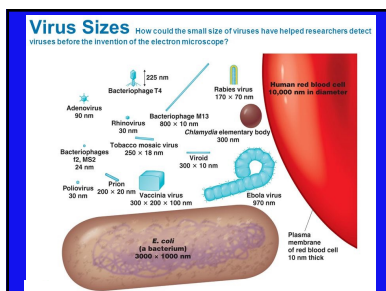
All the information in the world could be encoded and stored in DNA, and it would fit in the back of an SUV and last millions of years.

23

Evolution explains Unity & Diversity

- **Only evolution explains both**
 - **unity of life**
 - similarities between all living things
 - **diversity of life**
 - wide variety of different creatures on Earth

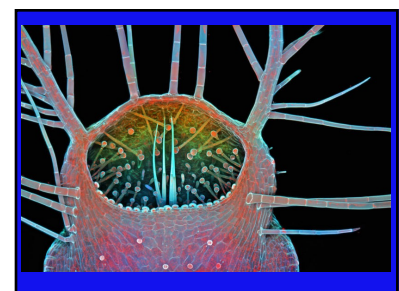
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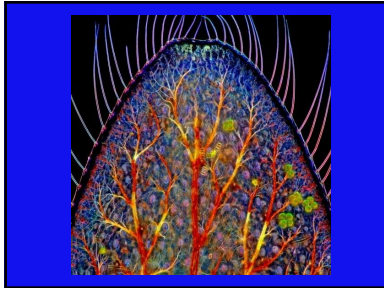
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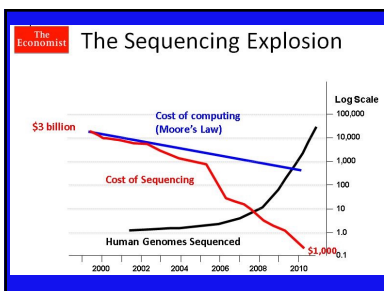
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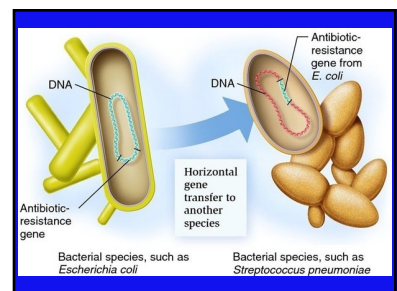
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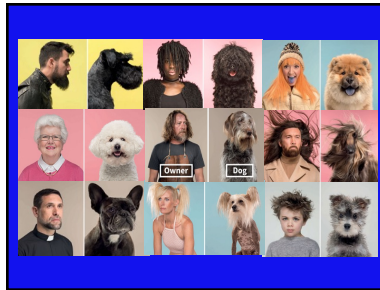
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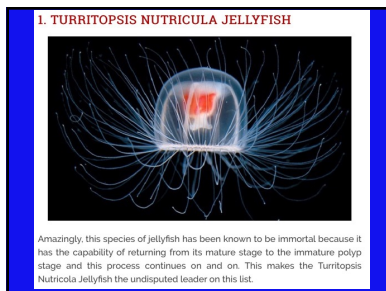
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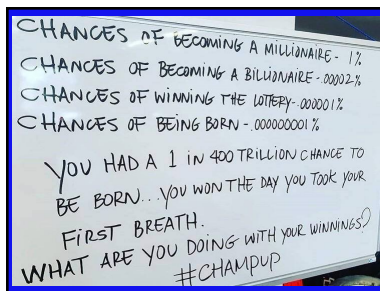
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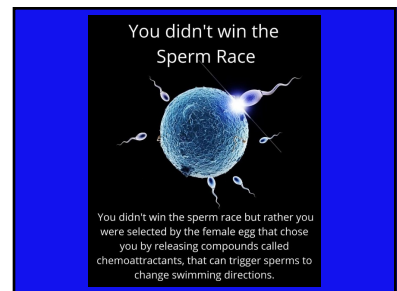
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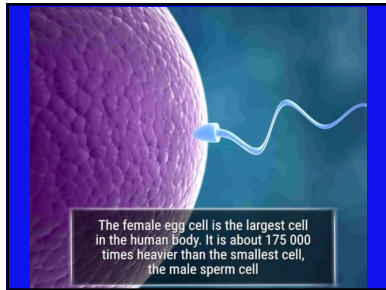
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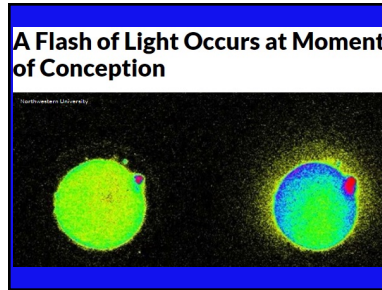
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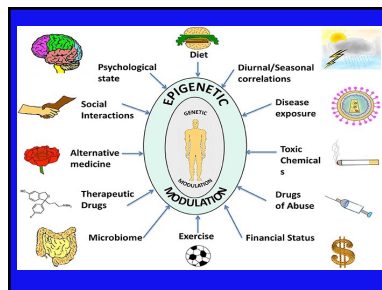
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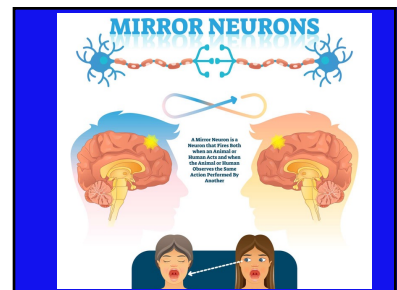
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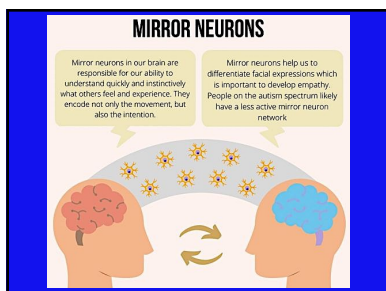
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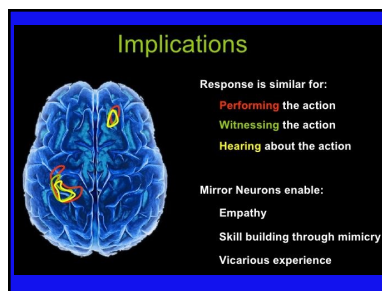
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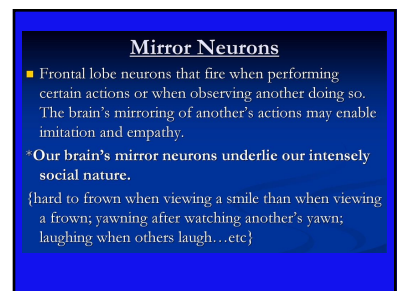
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Yawning

- Why are yawns so contagious?
- Cause for contagious yawning may be mirror neurons because of their correlation with imitation and empathy.
- 2011 behavioral study shows that the emotional closeness to another individual directly affects the contagiousness of the yawn.



55



56



57

self love

noun

1. A regard for one's own well-being and happiness.
2. A state of appreciation for oneself that grows from actions that support our physical, psychological and spiritual growth.

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self-love

[self lʌv] verb

nurturing your mind, body and soul. embracing experiences that shape you, looking in the mirror and knowing you are worthy, you are capable, you are beautiful.

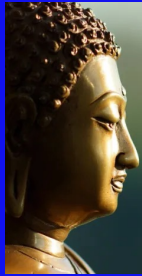
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HOW TO LOVE YOURSELF

- USE DAILY AFFIRMATIONS**
Affirmations work to help boost your self-esteem, which in turn, contributes to that goal of fearless self-love.
- STOP NEGATIVE THINKING**
Adding fuel to the fire of self-doubting patterns is the habit of negative self-talk and can leave you feeling down.
- BUILD YOUR STRENGTHS**
If social influence plays a role in how you're motivated, you run the risk of focusing attention in the wrong areas.
- FOCUS ON YOUR SUCCESSSES**
Each person has an integrated tendency to remember the negative events in their life, before they remember the positive.
- END THE HUMOUR IN LIFE**
Life is hard and if we spend too much time thinking about all those hardships, we are guaranteed to suffer. Laughter increases the endorphins that are released by your brain.



60




You can search throughout the entire universe for someone who is more deserving of your love and affection than you are yourself, and that person is not to be found anywhere.
You yourself, as much as anybody in the entire universe, deserve your love and affection.

- Buddha

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TYPES OF LOVE

PASSIONATE	COMPANIONATE
(A.K.A. Romantic Love/Infatuation)	(A.K.A. Compassionate Love)
<ul style="list-style-type: none"> ♥ State of extreme absorption with & desire for another ♥ Intense feelings of tenderness, elation, anxiety, sexual desire, & ecstasy ♥ Generalized physiological arousal ♥ Usually early in relationship ♥ The less you know, the more intense it is ♥ Faults overlooked & conflicts avoided ♥ Excitation overpowers logic & reason ♥ Transitory 	<ul style="list-style-type: none"> ♥ Characterized by friendly affection and deep attachment based on extensive familiarity with the loved one ♥ Tolerate another's shortcomings ♥ Desire to overcome difficulties & conflicts ♥ Commitment to ongoing nurturing of partnership ♥ Enduring




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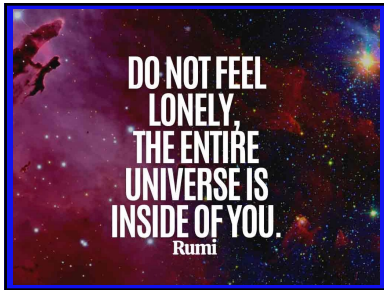
LONELINESS REPORT

Loneliness increases chance of premature death by as much as 30%

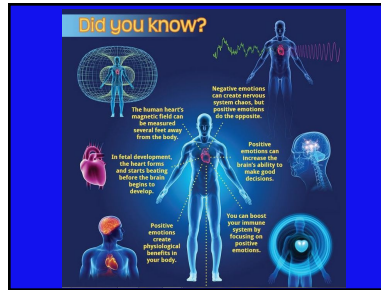
U.S. SURGEON GENERAL REPORT



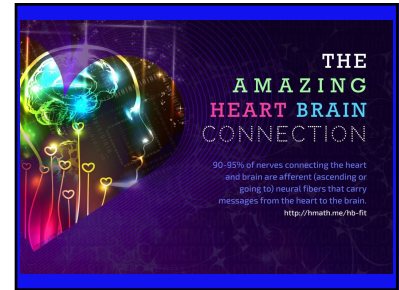
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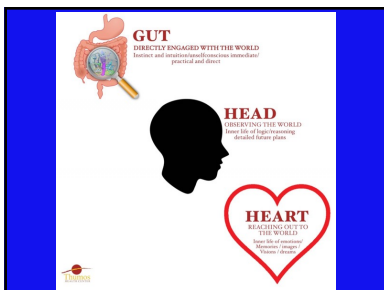
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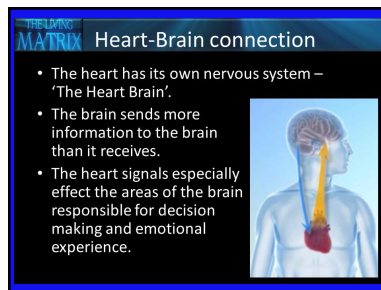
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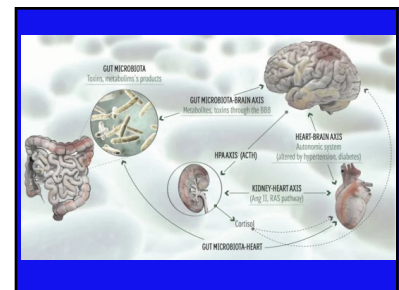
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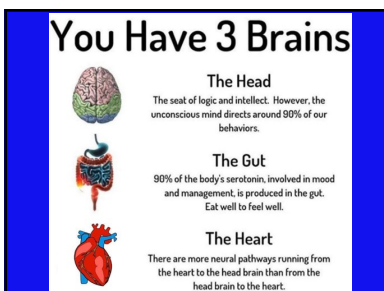
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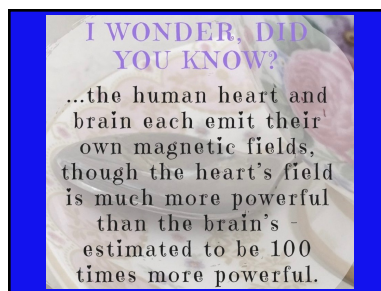
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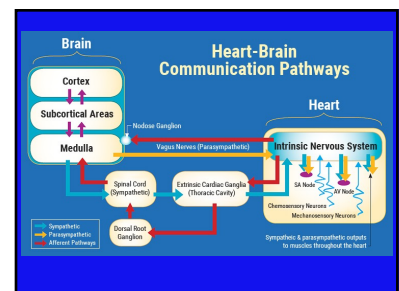
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72

The Science of the Heart.

Beyond its vital role in sustaining life by pumping blood, recent scientific discoveries reveal the heart as a source of wisdom and emotional intelligence that can rival, and even surpass, the brain. 🧠💖

73

The Heart's Surprising Power

Did you know that the heart generates the largest electromagnetic field in the body, detectable several feet away from us? (Think of it as your "vibe-creator" 🧲) This field changes according to our emotions, profoundly influencing our ability to communicate and connect with others. Research from the HeartMath Institute shows that a heart in a coherent state, achieved through feelings of love, gratitude, and compassion, can significantly enhance cognitive function, intuition, and energy levels.

Furthermore, studies have found that the heart sends more signals to the brain than the brain sends to the heart. These heart signals have a significant effect on brain function - influencing emotional processing, attention, perception, memory, and problem-solving.

In essence, the state of our heart directly impacts the state of our mind!!

74

Cultivating Love: A Key to Survival

Psychological studies underscore the importance of social connections for longevity and health. For instance, having strong, loving relationships has been linked to a reduced risk of heart disease, lower blood pressure, decreased stress levels, and a stronger immune system. It appears that the heart knows something profound about how we are meant to live - in connection and harmony with one another.

Our Emotions are Contagious

The science of the heart emphasizes that our emotional states are contagious, thanks to the heart's electromagnetic field. When we foster positive emotions, we not only benefit ourselves but also those around us, creating a ripple effect of wellness and connection.

Moreover, the heart's intuitive intelligence can guide us in making more compassionate decisions and building deeper connections with others. By listening to our hearts, we can navigate life with more empathy and understanding, leading to more meaningful and supportive relationships.

75

MORAL OF THE STORY? Love More

As we delve into the science of the heart, it becomes clear that one of the most revolutionary acts we can undertake is to love more. How?

- 💜 Stop to smell the roses - cultivate gratitude in the moment for life's natural wonders
- 🍊 Smile at people who walk by
- ❤️ Look for the best in people
- 💙 Be present with people - family, friends & strangers

Happy Valentine's Day!

76

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Brain's regions reveal romance

Researchers using brain scans have found which areas are most associated with feelings of love.

Areas highlighted on scans by type of love:

- Nucleus accumbens:** those who were madly in love, but recently dumped.
- Ventral tegmental area:** mostly associated with new love; key reward area.
- Raphe nucleus:** longtime lovers; area gives a sense of calm.

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The science of love

The hormones and chemicals that cause us to fall head over heels

Love on the brain

- Hypothalamus:** The hypothalamus is the primary brain region responsible for making you want to mate for good.
- Hippocampus:** The hippocampus is the memory-forming area of the brain, responsible for making you want to mate for good.
- Nucleus accumbens:** The nucleus accumbens is a brain region that has been strongly associated with reward.
- Nucleus accumbens:** The nucleus accumbens is a brain region that has been strongly associated with reward.
- Septal cortex:** The septal cortex is a brain region that has been strongly associated with reward.
- Amygdala:** The amygdala is a brain region that has been strongly associated with reward.
- Hypothalamus:** The hypothalamus is a brain region that has been strongly associated with reward.

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Which parts of the brain are highly stimulated when we fall in love?

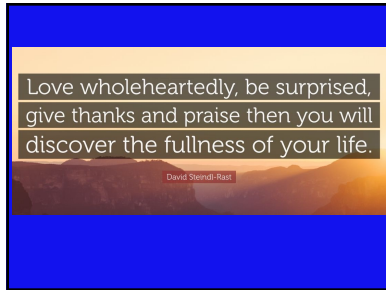
- VENTRAL TEGMENTAL AREA:** Located in the midbrain, this area is part of the brain's reward system and is highly stimulated when we fall in love. This part of the brain is stimulated by both the heart and the brain.
- AMYGDALA:** This area is part of the brain's reward system and is highly stimulated when we fall in love.
- HYPOTHALAMUS:** This area is part of the brain's reward system and is highly stimulated when we fall in love.
- SEPTAL CORTIX:** This area is part of the brain's reward system and is highly stimulated when we fall in love.
- NUCLEUS ACCUMBENS:** This area is part of the brain's reward system and is highly stimulated when we fall in love.
- DOPAMINE:** This area is part of the brain's reward system and is highly stimulated when we fall in love.
- BASAL GANGLIA:** This area is part of the brain's reward system and is highly stimulated when we fall in love.
- ANGULAR GYRUS:** This area is part of the brain's reward system and is highly stimulated when we fall in love.
- AMYGDALA HIPPOCAMPUS:** This area is part of the brain's reward system and is highly stimulated when we fall in love.

80

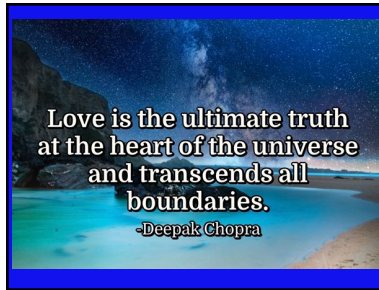
Maslow's hierarchy of needs

- Self-actualization:** desire to become the most that one can be
- Esteem:** respect, self-esteem, status, recognition, strength, freedom
- Love and belonging:** friendship, intimacy, family, sense of connection
- Safety needs:** personal security, employment, resources, health, property
- Physiological needs:** air, water, food, shelter, sleep, clothing, reproduction

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