THE PHYSICAL CONSEQUENCES OF LOVE

Love causes our body to release feel good chemicals, often resulting

in specific physical symptoms. Adrenaline in particular causes...

THE BODY



...the dilation of your blood

vessels, increasing blood flow and causing you to blush



your heart rate increasing

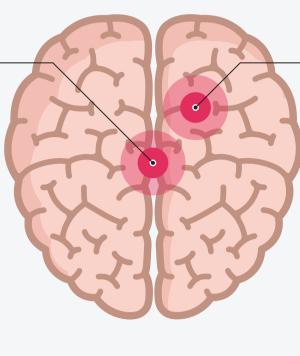
response, resulting in



system to stimulate, resulting in excess sweating

THE BRAIN Love causes activity in two key areas of the brain:

VENTRAL TEGMENTAL • A region of the brain associated with pleasure, focused attention and the motivation to pursue and acquire rewards



associated with reward detection and expectation and the integration of sensory experiences into social behaviour

• CAUDATE NUCLEUS

A region of the brain

THE STAGES OF LOVE From initial meeting to a lifetime together, there are thought to be three main stages of love:

LUST **ATTRACTION ATTACHMENT**

Lust causes the release of dopamine, adrenaline and norepinephrine.

Serotonin levels are lowered and cortisol increased Cortisol makes us feel stressed and anxious

solidifies serotonin levels increase, and oxytocin is also produced to help

As the relationship

improve attachment Oxytocin strengthens the bond we have

dopamine releases are far less frequent. CRF

After several years,

molecules are now released when couples are apart CRF make couples miss each other when apart

WHEN TO STOP LOOKING

Some people spend their whole lives looking for 'the one', but the following formula can tell you exactly how many people you need to reject before you will find your ideal partner:

THE MATHEMATICS

$$P(r) = \frac{r-1}{n} \sum_{i=r}^{n} \frac{1}{i-1}$$
 The answer to the equation is 37%, which means that in order to find your perfect partner, you should reject the first 37% of suitors. Let's say you start dating at 15, and you want to settle down by the time you're 40...

...you should reject everyone you meet before the age of 24, and then pick the next person you meet who is better than everyone you met before you turned 24.

> LENGTH OF RELATIONSHIP Maths can also help you predict the length of any relationship, using the following formula:

8 + .5Y - .2P + .9Hm + .3Mf + J - .3G - .5(Sm - Sf)2 + I + 1.5C= Predicted number of years

The number of previous Number of years the two The importance the male people knew each other partners of both people partner attaches to honesty

added together

J

The importance both

partners attach to humour

(added together)

The importance attached

to having good in-laws

(added together)

P

partner attaches to money in the relationship

Sm and Sf

The importance the

male and female attach

to good sex

The importance the female

beforehand

Mf

All 'importance' measures can be scaled from 1-5, where 1 is not important at all and 5 is very important

DISTANCE

between a pair of separated lovers. His calculation was:

C

The importance attached

to children in the relationship

(added together)

Hm

in the relationship

G

The importance both

partner attach to looks

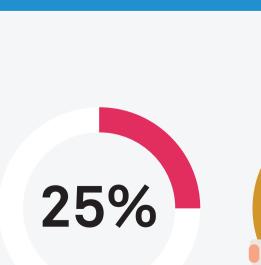
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In 1737, Italian philosopher Francesco Algarotti calculated the power of attraction

Love $\alpha \frac{1}{d^2}$

Meaning that the force of love decreases with the distance of separation. So the longer you are apart from someone (and the further away they are), the lower the force of love.

DID YOU KNOW...



their partner should have had four sexual partners before them

of men and women believe



The number one trait

that both men and

women look for in a

partner is wit

20%

ideal woman's first sexual partner

of men in the UK believe

that they should be their



http://www.bbc.co.uk/news/magazine-31168242 http://www.businessinsider.com/mathematicians-claim-to-have-discovered-the-formula-for-love-2014-3?IR=T http://www.dailymail.co.uk/sciencetech/article-3014452/Choose-ugly-friends-highlight-flaws-don-t-settle-age-22-Mathematician-reveals-formulas-finding-true-love.html https://www.inc.com/jessica-stillman/this-mathematician-claims-to-have-found-the-formula-for-finding-true-love.html https://www.brainpickings.org/2015/02/18/hannah-fry-the-mathematics-of-love/ http://www.telegraph.co.uk/men/relationships/10690668/Have-scientists-devised-the-formula-for-lasting-love.html

- https://www.indy100.com/article/is-there-a-mathematical-formula-for-love--xyQHvH9Qng https://www.reuters.com/article/us-love-formula/there-really-is-a-formula-for-love-idUSTRE61A1CQ20100211 http://mentalfloss.com/article/54447/what-happens-your-brain-when-youre-love http://mentalfloss.com/article/54447/what-happens-your-brain-when-youre-love https://www.sciencedaily.com/releases/2014/02/140206155244.htm
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