The Science of Love

Love at First Sight
You see someone. Within milliseconds, your medial prefrontal cortex tells you they’re attractive.

Chemical Romance
Hormones and neurochemicals from your brain flood your body. Love comes in THREE stages, which can overlap.

1. Sexual Desire
Possible without attachment or infatuation
Can rise and fall during long-term relationships
Testosterone increases in both men and women
Estrogen increases in women

2. Limerence
Infatuation
A primitive instinct
Characterized by an increase in dopamine, which motivates you to pursue a reward
Serotonin decreases, which can sometimes cause obsession
Testosterone decreases in men and increases in women (this may help men focus sexual interest)

3. Attachment
Increases with time in healthy and sustainable relationships, while limerence dwindles
Oxytocin (the “cuddle hormone”) increases over time in long-lasting relationships

Love Can Be Scary
If you see someone you find attractive, your sympathetic nervous system may have a fight-or-flight reaction, releasing adrenaline, norepinephrine and cortisol.
Adrenaline and norepinephrine make your heart race.

Broken Heart?
Losing a loved one or a love interest can also cause a stress response in the body.
For older people, disruption in routine can cause depression.

Get the Nerve Up
Your vagus nerve runs from your brain to your stomach. Your fight-or-flight stress response stimulates this nerve, which is why your stomach does somersaults when you see a person you find attractive.

Sources:
https://www.northeastern.edu/health/nervous-system.html
https://www.verywellmind.com/what-is-the-science-of-attraction-overview-4667071

Northwestern Medicine