

The Biology of Thankfulness

Numbers 11:1-3 (ESV)

1 And the people complained in the hearing of the Lord about their misfortunes, and when the Lord heard it, his anger was kindled, and the fire of the Lord burned among them and consumed some outlying parts of the camp.

2 Then the people cried out to Moses, and Moses prayed to the Lord, and the fire died down.

3 So the name of that place was called Taberah, because the fire of the Lord burned among them.

Romans 1:21 (ESV) - For although they knew God, they did not honor him as God or give thanks to him, but they became futile in their thinking, and their foolish hearts were darkened.

2 Timothy 3:1-3

1 But understand this, that in the last days there will come times of difficulty.

2 For people will be lovers of self, lovers of money, proud, arrogant, abusive, disobedient to their parents, UNGRATEFUL, unholy,

3 heartless, unappeasable, slanderous, without self-control, brutal, not loving good,

4 treacherous, reckless, swollen with conceit, lovers of pleasure rather than lovers of God,

5 having the appearance of godliness, but denying its power. AVOID SUCH PEOPLE.

While we might think of and take complaining as a sign of venting out, research says that it comes with a cost!

From a mental perspective, the effects of complaining can be so harsh on the brain that it wires it for negativity!

The brain is designed to work efficiently, meaning that when we repeat a thought, whether it is negative or positive, the nerve cells form a bridge between each other to expedite the passage of information.

As a result, the next time we have a similar thought, it is more easily transmitted.

Such a kind of mechanism is called neuronal wiring and can become habitual and engrained over time.

So, if we keep in complainant brain, it learns only that!

And if we consistently complain, the brain learns to default to negativity, reinforcing a mindset that focuses on problems rather than solutions.

A Stanford study shows that consistent effects of complaining can cause changes in the brain too.

It shrinks the hippocampus in particular, which is an important part of the brain.

Along with the negative brain changes, complaining also causes the release of the stress hormone cortisol.

All of these things can have long-lasting effects on your mental health, your thinking ability, and your general health.

Why does the Bible emphasize thankfulness so much?

1 Chronicles 16:8 (ESV) - Oh give thanks to the Lord; call upon his name; make known his deeds among the peoples!

Psalms 57:9 (ESV)

I will give thanks to you, O Lord, among the peoples; I will sing praises to you among the nations.

Psalm 86:12 (ESV) - I give thanks to you, O Lord my God, with my whole heart, and I will glorify your name forever.

Psalm 92:1 (ESV) - It is good to give thanks to the Lord, to sing praises to your name, O Most High;

Psalm 97:12 (ESV) - Rejoice in the Lord, O you righteous, and give thanks to his holy name!

Psalm 100:4 (ESV)

3 Know that the Lord, he is God! It is he who made us, and we are his; we are his people, and the sheep of his pasture.

4 Enter his gates with thanksgiving, and his courts with praise! Give thanks to him; bless his name!

5 For the Lord is good; his steadfast love endures forever, and his faithfulness to all generations.

Ephesians 5:4 (ESV) - Let there be no filthiness nor foolish talk nor crude joking, which are out of place, but instead let there be thanksgiving.

Philippians 4:6 (ESV) - do not be anxious about anything, but in everything by prayer and supplication with thanksgiving let your requests be made known to God.

1 Thessalonians 5:18 (ESV) - give thanks in all circumstances; for this is the will of God in Christ Jesus for you.

Thankfulness isn't just polite it's spiritually powerful!

Here's why the Bible emphasizes it:

It shifts our focus from problems to blessings.

It builds faith by remembering past victories.

It invites God's presence.

It humbles us, reminding us we're not self-made.

God knows that a thankful heart is a healthy heart!

It keeps us grounded, joyful, and connected to Him especially in tough times!

When life feels uncertain or heavy, the nervous system shifts into protection mode!

Gratitude—even in the smallest form—has been shown to regulate the stress response, restore emotional steadiness, and begin healing from the inside out!

Practicing gratitude activates key brain regions, calms the sympathetic nervous system, and supports deep rest and recovery!

1. Thankfulness Can Gently Rewire the Brain!

The brain is constantly changing in response to experience.

This ability—called neuroplasticity—means that the thoughts and habits we repeat become deeply embedded over time.

When we express or reflect on gratitude, areas of the brain associated with emotional regulation, empathy, and perspective—especially the medial prefrontal cortex—become more active.

Over time, this creates stronger neural pathways that support balanced thinking, a sense of safety, and greater resilience.

It shifts the inner narrative from “something is wrong” to “something is still right.”

2. Thankfulness Soothes the Body’s Stress Response!

Chronic stress can quietly wear down the body, contributing to inflammation, weakened immunity, sleep disruption, and even cardiovascular strain.

Thankfulness acts as a natural counterbalance by engaging the parasympathetic nervous system—the branch of the autonomic nervous system responsible for rest, repair, and recovery.

Studies have shown that when people practice Thankfulness regularly, their cortisol levels decrease, blood pressure lowers, and heart rate variability improves—a sign of a well-regulated nervous system.

3. Thankfulness Offers Emotional Stability in Difficult Seasons!

Thankfulness is not about ignoring pain; it’s about finding something meaningful within it.

People who maintain a Thankfulness practice tend to report lower levels of depression and anxiety, even during adversity.

Practicing Thankfulness doesn't mean pretending everything is okay.

It means remembering that even in brokenness, there can still be light.

If your emotional landscape has felt fragile, Thankfulness can offer a gentle reminder: not everything is lost.

4. Thankfulness Supports Better Rest and Physical Recovery!

Sleep is not just a luxury—it is foundational to immune function, hormone balance, memory, and emotional well-being.

Thankfulness has been shown to improve sleep quality, reduce insomnia, and increase overall satisfaction with rest!

5. Thankfulness Doesn't Have to Be Grand!

Thankfulness will not solve every problem.

It won't remove pain or rewrite the past.

But it can offer something equally important: perspective, stability, and peace in the midst of it all.

Thankfulness turns what we have into enough!

So, how many times does the Bible say "give thanks"?

Around 73 times directly...

But the spirit of thanksgiving is present on nearly every page!

Thankfulness isn't just a nice idea...

It's a spiritual habit that changes everything!

Thankfulness keeps you from falling into a victim mentality!