

HOW DO ANTIDEPRESSANTS WORK?

"WILL IT
CHANGE
WHO I AM?"

"WHAT IF I
BECOME
DEPENDENT
ON THEM?"

"I DON'T EVEN KNOW WHAT
THIS DRUG ACTUALLY
DOES."

FIRST: A CLARIFICATION

Antidepressants
aren't one drug.

SSRIS, SNRIS, TCAS, MAOIS ARE
DIFFERENT TYPES OF ANTIDEPRESSANTS:

- DIFFERENT CLASSES,
- DIFFERENT MECHANISMS,
- USED FOR DIFFERENT REASONS

THIS POST FOCUSES ON SSRIS AND
SNRIS, THE MOST COMMONLY
PRESCRIBED ANTIDEPRESSANTS. SO IF
YOU'RE ON SOMETHING ELSE, SOME OF
THIS APPLIES AND SOME DOESN'T.

(WORTH ASKING YOUR DR WHICH PARTS
ARE RELEVANT TO YOU)

THE EXPLANATION YOU'VE
PROBABLY HEARD:
"YOUR BRAIN HAS A
CHEMICAL IMBALANCE"

We used to think depression = low serotonin, SSRIs top it up, balance restored. This is now considered a significant oversimplification.

Research has since shown the picture is more complex. Serotonin is involved*, but not in the straightforward "too little, top it up" way as was once described.**



WHAT HAPPENS WHEN YOU TAKE THE PILLS AT FIRST?

SSRIs make more serotonin available between nerve cells.

This happens from day one.

The initial serotonin surge activates receptors and this can cause side effects (nausea, restlessness, disrupted sleep).

These receptors desensitize over 1–2 weeks as the brain adapts. Which is exactly when side effects tend to ease.

The therapeutic effect comes later
→

What happens over the next few weeks:

- 1 Sustained serotonin increase activates a receptor called **5HT1A**, which downregulates over 2 to 4 weeks
- 2 This triggers release of **BDNF**, a protein that supports the growth and survival of neurons
- 3 New brain cells begin to form and integrate, especially in the **hippocampus**, a region central to mood and memory
- 4 **The brain becomes more plastic**, more able to form new patterns, respond to experience, and move out of stuck states

NEUROPLASTICITY

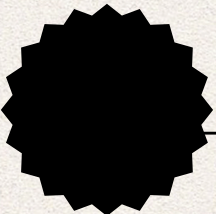
THE BRAIN BECOMES MORE ABLE TO GROW NEW CONNECTIONS, REORGANIZE ITSELF, AND RESPOND TO THE ENVIRONMENT ADAPTIVELY

EMOTIONAL PROCESSING SHIFT

THE NEGATIVE BIAS IN HOW THE BRAIN READS SITUATIONS/PEOPLE/THE FUTURE BEGINS TO EASE

The plasticity creates the capacity for change - the emotional shift is what that change feels like.

WHY WEEKS, NOT DAYS?

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- Brain reorganisation takes time (new neurons forming, new connections integrating, a gradual shift in how the brain weights negative information). It's simply how brain change works.
 - Neuroplastic changes are also shaped by what's happening in your life during this period. The medication creates the conditions, and your environment/your relationships,/therapy influence what grows in that space. It's one reason why medication and therapy together tend to work better than either does alone.

THE FIRST SIX WEEKS, ROUGHLY:

WEEKS 1-2

Side effects can appear before any benefit. Nausea, restlessness, disrupted sleep. This is expected. **Don't stop without telling your doctor.**

WEEKS 3-4

Side effects often ease. Sleep, appetite, and energy may begin to shift before mood does.

WEEKS 4-6

A reasonable point to assess how you're doing and follow up with your doctor.

Back to where we
started



WILL IT CHANGE WHO I AM?

Research consistently shows that traits like emotional instability and social withdrawal shift during antidepressant treatment. So does neuroticism (a temperamental tendency toward negative emotional reactivity, that sits independently of mood).

Whether that's the drug acting directly or depression lifting, the experience is the same: most people who respond say they feel more like themselves, not less.

