

# What are brain chemicals (neurotransmitters)? How do they work? -and how can you alter them, naturally?

## What are neurotransmitters?

The chemistry of the brain is controlled by five main neurotransmitters (brain chemicals). These are serotonin, dopamine, nor-adrenaline, acetyl-choline and GABA. The amounts and ratios of each of these will determine how well you sleep, your mood and energy levels, sexual desire, whether you suffer from anxiety, your mental sharpness and your ability to learn and recall memories.

- **Serotonin:** this neurotransmitter is often known as the “happy hormone”. It is responsible for good mood and has a mild anti-anxiety effect. It also helps prevent obsessive or compulsive behaviour and it reduces aggressiveness.
- **Dopamine:** this is the “self-confidence & will-power” neurotransmitter. A lack of dopamine typically results in addictive behaviour (e.g. alcoholism or binge eating) and poor self-control. People with low dopamine are often overly shy or lacking in self-confidence. Dopamine is also responsible for sexual desire.
- **Nor-adrenaline:** the “energy” neurotransmitter. People lacking in nor-adrenaline typically have low energy and reduced attention levels. They also find it extremely difficult managing stressful situations.
- **Acetyl-choline:** the “intelligence” neurotransmitter. Acetyl-choline is responsible for memory, learning and verbal fluency. When it is lacking, memory problems can manifest, and creativity can be reduced.
- **GABA:** the “calming” neurotransmitter. Unlike the other neurotransmitters, which are mostly stimulating, GABA is a sedating anti-anxiety neurotransmitter. Its levels rise particularly at night, and it is influenced by a brain hormone called melatonin. People with low levels of GABA or melatonin experience excessive anxiety and difficulty with sleeping.

## Prescription medicines:

Prescription medicines are mind altering pharmaceuticals that often work like a bull in a china shop: they can cause havoc on the delicate balance of these brain chemicals, resulting in unwanted side-effects. Because of this, prescription anti-depressant medicines have been shown to increase suicidal thoughts in some, whilst at the same time obliterating sexual desire and ability to reach climax, and also causing weight-gain in many people; anti-anxiety medicines and sleeping tablets can cause addiction and tearfulness, and become less effective with continued use. Brain stimulants can cause irritability, headaches and nerve damage.

## Natural solutions:

Whenever dealing with the brain, it is important to use the safest, most gentle, yet still effective options that address the root cause of the problem of unbalanced neurotransmitters. For this reason SOLAL Technologies has developed a range of scientifically researched, non-prescription, over the counter, non-addictive, natural supplements, to balance each neurotransmitter.

## How to choose which supplements are best for your neurotransmitter balance:

Each neurotransmitter has different effects on the brain. A deficiency of a particular neurotransmitter will have a particular set of symptoms. From your symptoms, you will be able to identify which neurotransmitter you are most likely deficient in, and which supplements you should take.

Neurotransmitter:	Functions of this neurotransmitter:	Symptoms of deficiency:	To correct deficiency take these products:
Serotonin	Excitement, Enthusiasm, Joy, Challenge, Happiness	Poor sleep, Sadness, Lethargy, Obsessiveness, Compulsiveness, Sugar/carbohydrate craving, Irritable Bowel Syndrome, PMS, Pain	Naturally High™ Magnesium Glycinate SAMe Butanedisulfonate Super Mega-B™
Dopamine	Motivation, Energy, Enthusiasm, Self-confidence, Pleasure, Self-discipline, Sexual function	Fatigue, Addictions, Depressive symptoms, ADD, Hyperactivity, Obesity	Tyrosine (L-Tyrosine) Ginkgo Biloba SAMe Butanedisulfonate Stress Damage Control™
Nor-adrenaline	Attention, Vigilance, Focus, Sweating, Blood pressure, Fight or flight response (i.e. ability to handle stressful situations)	Inability to cope with stressful situations, Loss of energy, Reduced blood pressure, Abnormal temperature regulation (loss of sweating)	L-Phenylalanine SAMe Butanedisulfonate Super Mega-B™ Stress Damage Control™
Acetyl-choline	Memory, Learning, Information processing, Language	Memory loss (including age-related memory loss), Agitation, Loss of creativity, Learning disorders	Krill Oil (Neptune) Omega 3 DMAE Acetyl-L-Carnitine Phosphatidylserine Ginkgo Biloba
GABA	Calmness, Anti-anxiety, Contentedness	Tremor, Anxiety, Insomnia and sleep disturbances, Tension, Heartbeat irregularities, Phobias, Restlessness, High blood pressure, Excessive worrying	Theanine (L-Theanine) Inositol Magnesium Glycinate Taurine N-Acetyl-Cysteine <i>For sleep:</i> Melatonin &/or Herbal Sleep™



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PRESCRIBED BY DOCTORS  
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NOTE: IF YOU ARE ALREADY ON PRESCRIPTION MEDICINES, SUCH AS ANTI-DEPRESSANTS, DO NOT DISCONTINUE THESE UNLESS UNDER THE CLOSE SUPERVISION OF YOUR DOCTOR. THE PRODUCTS HIGHLIGHTED IN THIS TABLE SHOULD NOT BE COMBINED WITH PRESCRIPTION MEDICINES, UNLESS UNDER THE SUPERVISION OF YOUR DOCTOR OR PHARMACIST.

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Available from Doctors, Leading Pharmacies, Dis-Chem Pharmacies, Health Stores or from SOLAL Technologies.

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