

# Gabapentin

Physicians are legally responsible for disclosing all medication warnings, precautions, and adverse effects. Failure to do so is [medical malpractice](#).

*If safer alternatives are available, physicians are responsible for providing them as a first line of treatment.*

**USAGE:** Gabapentin belongs to a class of medications known as anticonvulsants or antiepileptic drugs.

Gabapentin primarily affects the neurotransmitter system involving gamma-aminobutyric acid (GABA). GABA is an inhibitory neurotransmitter in the brain, meaning it helps to calm or reduce the activity of neurons. Gabapentin is believed to release GABA or enhance its effects in the brain.

Modulating GABA activity to stabilize electrical activity in the brain can reduce abnormal firing of neurons that lead to seizures, nerve-related pain, and psychiatric conditions like anxiety, bipolar disorder, insomnia, PTSD and others.

**Anxiety Disorders:** Nervous system is in sympathetic dominance (fight or flight).

**Bipolar Disorder:** Symptoms such as mood swings, anxiety

**Insomnia:** Used off-label for sleep quality and duration, especially in individuals with anxiety or mood disorders.

**Post-Traumatic Stress Disorder (PTSD):** Symptoms such as anxiety and insomnia.

**Seizures:** Sudden, uncontrolled electrical disturbances in the brain that can cause changes in behavior, consciousness, movements, sensations, or feelings. They can vary widely in appearance and duration.

**Postherpetic nerve pain:** A type of nerve pain that occurs as a complication of shingles, also known as herpes zoster.



# -----WARNINGS AND PRECAUTIONS-----

## 1. **Drug Reaction with Eosinophilia and Systemic Symptoms (Multiorgan hypersensitivity):** (5.1)

- **Drug Reaction with Eosinophilia and Systemic Symptoms (Multiorgan hypersensitivity):** The immune system reacts abnormally to the drug, triggering inflammation and tissue damage throughout the body. This can lead to serious complications, including organ dysfunction and failure.

## 2. **Anaphylaxis and Angioedema:** (5.2)

- **Anaphylaxis:** An allergic reaction that occurs rapidly and can affect multiple organ systems in the body. Symptoms of anaphylaxis include difficulty breathing, swelling of the throat and tongue, a sudden drop in blood pressure, rapid heartbeat, hives, nausea, vomiting, and dizziness. Anaphylaxis can lead to shock and death.
- **Angioedema:** Angioedema is a condition characterized by sudden, localized swelling beneath the skin's surface. It typically affects areas such as the face, lips, tongue, throat, hands, feet, or genitals. Swelling in the throat or tongue can lead to airway obstruction and difficulty breathing.

## 3. **Suicidal Behavior and Ideation:** (5.6)

- **Suicidal behavior:** Actions taken with the intent to cause one's own death; from self-harm and suicide attempts to completed suicide.
- **Suicidal ideation:** Thoughts about or preoccupation with suicide. These thoughts can vary in intensity, ranging from fleeting considerations to persistent and intrusive ideas about ending one's life.

#### 4. **Neuropsychiatric Adverse Reactions:** (5.7)

- A negative or harmful reaction that affect the nervous system (neuro) and mental health (psychiatric).
- Neuropsychiatric adverse reactions include changes in behavior, mood, cognition, or other neurological functions. Examples include:
  - Increased agitation, irritability, or aggression
  - Mood disturbances such as depression, anxiety, or mania
  - Cognitive impairments such as confusion, memory problems, or difficulty concentrating.
  - Psychotic symptoms such as hallucinations or delusions

## ---ADVERSE REACTIONS-----

#### 1. **Postherpetic neuralgia: Dizziness, somnolence, and peripheral edema (6.1):**

- **Postherpetic neuralgia:** Nerve pain.
- **Somnolence:** Abnormally severe sleepiness and fatigue.
- **Peripheral edema:** Swelling of the hands, arms, legs, feet.

**NATURAL SOLUTION:** [Celtic Salt](#) may help with swelling:

- **Electrolyte Balance:** Celtic salt contains minerals like potassium and magnesium, which are essential electrolytes involved in regulating fluid balance in the body. Maintaining proper electrolyte balance can help prevent excessive fluid retention and swelling in the tissues.
- **Osmotic Effect:** The minerals in Celtic salt may exert an osmotic effect, meaning they can draw excess fluid out of swollen tissues and help redistribute it throughout the body. This can potentially alleviate swelling and promote better circulation.
- **Alkalizing Properties:** Some proponents of Celtic salt suggest that its alkalizing properties may help reduce inflammation, which could contribute to swelling.

## 2. Epilepsy: (6.1)

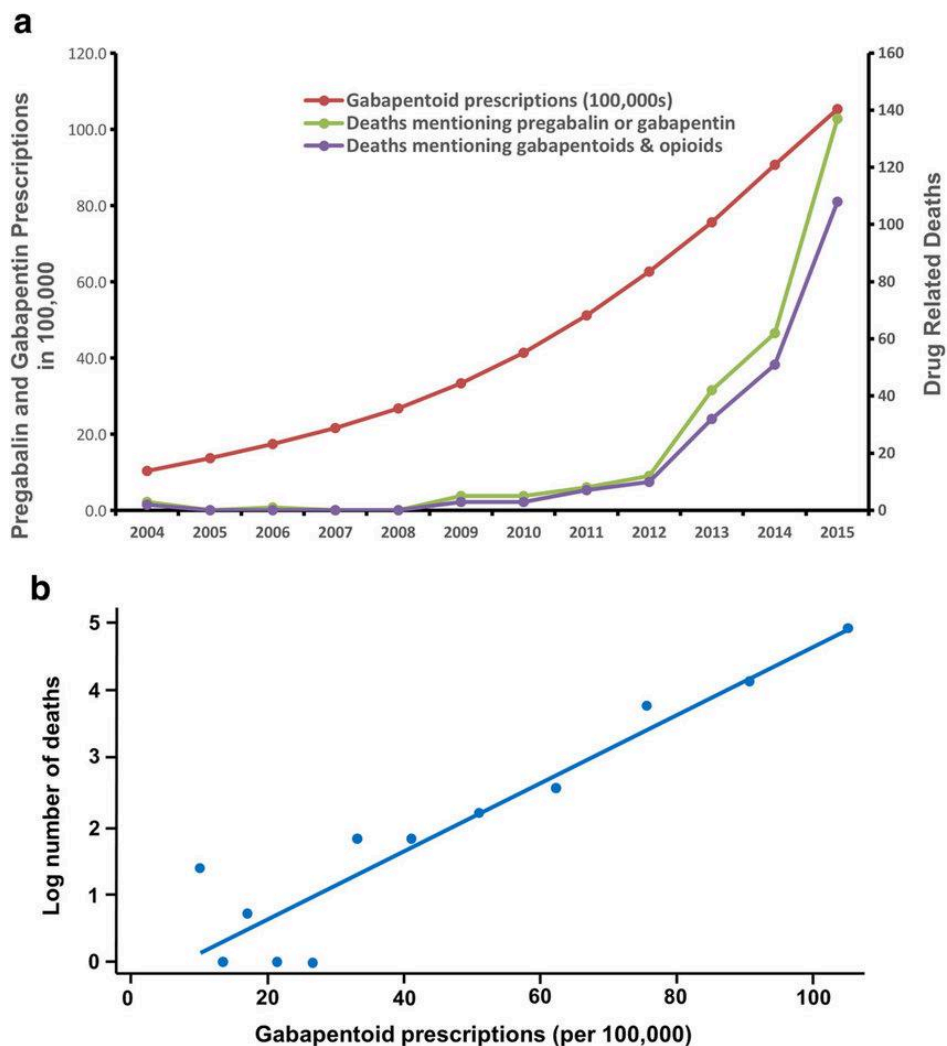
- Recurrent seizures, which are sudden, uncontrolled electrical disturbances in the brain.

Key points about seizures include:

- **Types:** There are many types of seizures, which can be broadly classified into two main categories:
  - focal seizures (also called partial seizures, originate in a specific area of the brain)
  - generalized seizures involve both sides of the brain
- **Symptoms:** Range from mild to severe; may include convulsions, muscle rigidity, repetitive movements, loss of consciousness, staring spells, changes in sensations or emotions, or unusual behaviors.
- **Triggers:** Triggered by various factors, including epilepsy, fever, head injury, brain tumors, stroke, infections, sleep deprivation, stress, flashing lights (in photosensitive epilepsy), or certain medications or substances.
- **Duration:** Can vary from a few seconds to several minutes. Prolonged seizures lasting longer than five minutes or recurring seizures without full recovery between episodes are considered medical emergencies and require immediate medical attention.
- **Diagnosis:** Diagnosis of seizures typically involves a medical history, physical examination, neurological evaluation, and diagnostic tests such as electroencephalogram (EEG), brain imaging (such as MRI or CT scan), and blood tests.

# Gabapentin-related Deaths: Patterns of Abuse and Postmortem Levels

“In our series, we review 104 cases of decedents who tested positive for gabapentin in postmortem blood samples and an additional 53 nonfatal cases of motor vehicle drivers suspected of driving under the influence. In 47.1% of the fatality cases, gabapentin was directly involved in death... Persons who died of a gabapentin-related drug death were prescribed the drug legitimately 91.4% of the time..”



Department of Health and Human Services

OFFICE OF  
INSPECTOR GENERAL

PROMOTION OF PRESCRIPTION DRUGS  
THROUGH PAYMENTS AND GIFTS



Richard P. Kusserow  
INSPECTOR GENERAL

OEI-01-90-00480

## EXECUTIVE SUMMARY

---

### PURPOSES

The purposes of this study are to (1) describe the range of drug promotion practices that involve physicians receiving money or other items of value from pharmaceutical companies, (2) assess the vulnerabilities such practices present, and (3) examine the responses of government and private groups to inappropriate or illegal practices.

### BACKGROUND

Much attention has focused recently on pharmaceutical companies' promotional techniques. The Senate Labor and Human Resources Committee conducted hearings in December 1990 that highlighted questionable promotional practices. At these hearings, the American Medical Association (AMA) and the Pharmaceutical Manufacturers Association (PMA) testified about ethical guidelines that the AMA had just adopted and the PMA had fully endorsed to help their members avoid potentially unethical situations.

We focus in this report on many drug promotion techniques that have been used recently and on the potential hazards each presents to physicians and the practice of good medicine. Because this report is not based on a statistically valid sample of physicians, we are not reporting on the extent of promotional practices involving money or other items of value.

Our data were gathered from (1) interviews with physicians and pharmacists in six hospitals, (2) ethical guidelines produced by various medical professional and industry groups, and (3) a review of relevant academic and professional literature and mass media.

This is the first of several reports on prescription drug promotion we plan to issue. An upcoming report will focus on the current prevalence of promotional practices involving pharmaceutical companies offering money or other items of value to physicians. Another report will evaluate the scientific merit and validity of prescription drug advertising in medical journals.

### FINDINGS

*Pharmaceutical companies offer money and other items of value to physicians for a range of purposes, from sponsoring important educational activities to actively promoting their products. Offers that have been used for promotional purposes fall into four major categories.*

**READ THE LAST PARAGRAPH**



## **Diagnostic and Statistical Manual of Mental Disorders - DSM**

Robert Spitzer, chairperson of DSM 3, acknowledges that most mental disorders lack clear biological causes, that the inclusion of disorders is determined by consensus rather than scientific evidence. Many disorders were added without robust research. All members of the panel advocating medications as the primary treatment for DSM-diagnosed disorders were financially linked to the pharmaceutical industry.

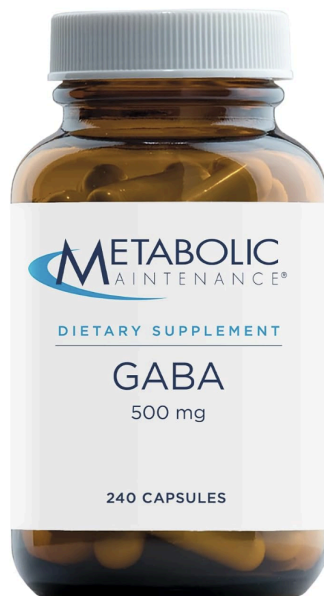
21 of the 29 members of the DSM 5 had financial ties to the pharmaceutical company including the chair (David Kupfer) and vice chair (Darrel Regier). Six months after the release of DSM-5, it was the highest-selling book in the United States. Pharmaceutical industry was purchasing DSM-5 in bulk and distributing it for free to clinicians across the country. The motive is apparent – by ensuring that more clinicians have access to the manual, the industry contributes to the medicalization of a broader spectrum of conditions, subsequently expanding the market for psychiatric drugs.

# NATUROPATHIC SOLUTIONS:

*Pfeiffer's Law: For every drug that benefits a patient, there is a natural substance that can achieve the same effect.*

Gabapentin primarily affects the neurotransmitter system involving gamma-aminobutyric acid (GABA). [GABA](#) is an inhibitory neurotransmitter in the brain, meaning it helps to calm or reduce the activity of neurons. Gabapentin is believed to release GABA or enhance its effects in the brain.

MEDICATIONS DO NOT REPLENISH DEPLETED  
NEUROTRANSMITTER SYSTEMS.



**AMINO ACIDS REPLENISH NEUROTRANSMITTER SYSTEMS.**

They also modulate REM, the stage of sleep associated with vivid dreaming and nightmares; calms brain activity; induces sleep, reduces anxiety.



## GABA Foods



### GABA-Boosting Brown Rice and Edamame Bowl

#### Ingredients:

- 1 cup of brown rice
- 2 cups of water
- 1 cup of shelled edamame (frozen or fresh)
- 1 cup of chopped broccoli florets
- 3 cups fresh spinach
- 1/4 cup of diced scallions (green onions)
- 2 tablespoons of tamari
- 1 tablespoon of rice vinegar
- 1 teaspoon of sesame oil
- 1 teaspoon of grated fresh ginger
- 1 clove of garlic, minced
- Black sesame seeds for garnish (optional)





Theanine has been found to influence brain wave patterns, particularly alpha waves associated with a state of wakeful relaxation. By promoting alpha wave activity, theanine may induce a state of calmness and mental clarity conducive to better sleep and fewer disturbances during the night. Reduces stress, reduces anxiety.

# BONUS NATURAL SOLUTIONS

## ANXIETY, MOOD SWINGS, INSOMNIA

[L-tryptophan](#) or its derivative, [5-HTP \(5-Hydroxytryptophan\)](#)

L-tryptophan is an essential amino acid, meaning it must be obtained from the diet as the body cannot produce it on its own. Once consumed, L-tryptophan is converted into serotonin, a neurotransmitter that regulates mood, and anxiety. Serotonin is then further converted into melatonin, a hormone that helps regulate the sleep-wake cycle.

Increasing the availability of L-tryptophan through diet or supplementation can enhance serotonin levels, reducing anxiety, stabilizing moods, and increasing sleep quality. This is why L-tryptophan and 5-HTP supplements are used to support mental health conditions like anxiety, depression, insomnia, bi-polar disorder, and PTSD.

## PRECAUTIONS

It is essential to consult with a professional before starting any new supplement regimen, especially if you're already taking mental health medications. Serotonin syndrome is a condition that can occur when certain supplements increasing serotonin levels go beyond the normal limit. Symptoms can vary in severity and may include:

- **Agitation or restlessness:** Feeling unusually jittery, anxious, or on edge.
- **Confusion:** Difficulty thinking clearly or concentrating.
- **High body temperature:** Fever or elevated body temperature, sometimes reaching dangerous levels (hyperthermia).
- **Increased heart rate:** Rapid heartbeat or palpitations.
- **Dilated pupils:** Enlarged pupils that do not respond to changes in light.
- **Muscle rigidity:** Stiffness, muscle tension, or involuntary muscle contractions.
- **Tremors:** Shaking or trembling movements, especially in the hands or fingers.

- **Sweating:** Profuse sweating, even in cool environments.
- **Diarrhea:** Frequent bowel movements or diarrhea.
- **Headache:** Persistent or severe headache.
- **Shivering or goosebumps:** Uncontrollable shivering or chills.
- **Nausea and vomiting:** Feeling sick to your stomach or vomiting.
- **Seizures:** Uncontrolled electrical activity in the brain resulting in seizures, in severe cases.





## TRYPTOPHAN FOODS

### Tryptophan-Boosted Sweet Potato and Lentil Bowl

Ingredients:

- 2 medium sweet potatoes, peeled and diced
- 1 cup of green or brown lentils, rinsed
- 1 cup of kale, chopped
- 1/2 cup of quinoa
- 1/4 cup of pumpkin seeds (pepitas)
- 1/4 cup of dried cranberries
- 2 tablespoons of olive oil
- 1 teaspoon of ground cumin
- Salt and pepper to taste
- Juice of 1 lemon



## Other Food Sources of Tryptophan

- [Pumpkin seeds](#) - also contain nutrients such as [magnesium](#), [zinc](#), and [omega-3 fatty acids](#).
- [Soy products](#) ([Tofu](#), [tempeh](#), [edamame](#))
- [Sesame seeds](#): Also contain nutrients like calcium, iron, and magnesium
  - Black sesame seeds: anthocyanin - natural antidepressant

**5-HTP** derived from the amino acid [tryptophan](#) and a precursor for serotonin production. Serotonin regulates REM, the stage of sleep associated with vivid dreaming and nightmares; reduces anxiety and stress.





Cannabinoids, such as THC (tetrahydrocannabinol) and CBD (cannabidiol), interact with the body's endocannabinoid system, which plays a role in regulating various physiological processes, including mood, sleep, pain sensation, and stress response.

Here's how cannabinoids can help improve different conditions:

- **Anxiety:** Cannabinoids, particularly CBD, have been shown to have anxiolytic (anxiety-reducing) effects. CBD interacts with receptors in the brain that regulate anxiety-related behaviors, helping to modulate stress response and promote feelings of calmness and relaxation.
- **Insomnia:** Cannabinoids, particularly THC, may help improve sleep by reducing the time it takes to fall asleep and increasing overall sleep duration. THC can have sedative effects, making it easier to initiate and maintain sleep. CBD may also indirectly improve sleep by addressing underlying factors such as anxiety or pain that can interfere with sleep quality.
- **Mood Swings:** Cannabinoids, especially CBD, have mood-stabilizing properties that can help mitigate mood swings associated with conditions such as bipolar disorder or depression. CBD's interaction with serotonin receptors in the brain may help regulate mood and emotional responses, promoting a more stable and balanced emotional state.
- **Seizures:** Cannabinoids, particularly CBD, have shown promise in the treatment of seizures, particularly in forms of epilepsy that are resistant to conventional treatments. CBD's anticonvulsant properties may help reduce the frequency and severity of seizures by modulating neurotransmitter activity and reducing excessive neuronal excitability.

## [Cannabinoids and Epilepsy](#)



Gluten Free | Vegetarian | Non-GMO

# NATUROPATHIC SOLUTIONS: PAIN

- **Supplements:** [Omega-3 fatty acids](#), [magnesium](#), and [vitamin D](#) reduce inflammation. [DL-phenylalanine](#) can improve emotional and physical pain.
- **Herbal Remedies:** Herbal supplements that have analgesic properties include [turmeric](#), [ginger](#), [boswellia](#), and [devil's claw](#).
- **Dietary Changes:** Anti-inflammatory diets rich in fruits, vegetables, whole grains, and healthy fats can help reduce pain and inflammation. Avoiding pro-inflammatory foods is imperative (meat, dairy, GMO's, etc).
- **Acupuncture:** Involves inserting thin needles into specific points on the body to stimulate nerves and release natural pain-relieving chemicals.
- **Physical Therapy:** Stretches can improve strength, flexibility, and mobility, which can reduce pain.
- **Mind-Body Practices:** [Meditation](#), [yoga](#), [tai chi](#), and [deep breathing exercises](#) can help relax muscles, reduce stress, and improve pain perception.
- **Capsaicin:** A compound found in chili peppers, can help relieve pain by desensitizing nerve receptors and reducing pain signals.
- **Hot and Cold Therapy:** Applying heat packs or cold packs to the affected area can help alleviate pain and inflammation. Alternate between hot and cold therapy for added relief.
- **Biofeedback:** Biofeedback techniques involve using electronic devices to monitor and control physiological responses such as heart rate, muscle tension, and skin temperature. Learning to control these responses through biofeedback training may help manage pain.
- **Massage Therapy:** Massage therapy can help relax muscles, improve circulation, and reduce tension, which may alleviate pain associated with certain conditions.



Vegetarian | Non-GMO

- **Cannabinoids:** Cannabinoids interact with the body's endocannabinoid system, which regulates various physiological processes, including pain sensation. By binding to cannabinoid receptors in the ECS, cannabinoids can modulate pain signaling and reduce the perception of pain.
  - **Anti-inflammatory Effects:** Can help reduce inflammation and swelling
  - **Neuromodulation:** Can modulate the activity of neurotransmitter systems involved in pain processing, such as the opioid and serotonin systems. This modulation can alter pain perception and transmission, leading to pain relief.
  - **Peripheral Effects:** Can exert effects directly on peripheral tissues, such as nerves and muscles, to reduce pain. For example, CBD has been shown to inhibit the release of inflammatory mediators from immune cells and reduce hypersensitivity in nerve fibers, which can alleviate pain.



Gluten Free | Vegetarian | Non-GMO



Gluten Free | Vegetarian | Non-GMO