



## HERBAL TREATMENT FOR SIDE EFFECTS OF ANTI ANXIETY DRUGS

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### INTRODUCTION

- Anxiety is characterized by feelings of unease, dread, and fear. It could make you sweat, feel fretful and tense, and have a fast heartbeat. It very well may be an ordinary response to stress.
- For example, you could feel restless when confronted with a troublesome issue at work, prior to stepping through an exam, or prior to pursuing a significant choice. It can assist you with adapting.
- Uneasiness disorder is a condition in which you have nervousness that doesn't disappear and can deteriorate over the long run. The reason for tension is obscure. Component, for example, genetic, brain biology, and chemical science, stress, and your current circumstance might assume a part.
- The uneasiness issues share self-announced side effects of tension and dread; uplifted nervousness and dread answering prompts that signal danger, signals that signal no danger, prompts that previously flagged danger, and settings related with danger; raised pressure reactivity to aversive upgrades; attentional predispositions to danger important improvements(1).
- Eventually all through their life, they influence more than 30% of grown-ups. Notwithstanding, there are a few psychotherapy medicines accessible to address uneasiness issues. With treatment, the vast majority can have standard, useful existences.
- Tension is unique in relation to fear in that dread is characterized as the profound reaction to a genuine danger, while nervousness is the expectation of a future danger (2).
- Natural elements are likewise significant. Twin examinations show that individual-explicit conditions impact tension, while shared ecological impacts (conditions that influence twins similarly) work during youth yet decline through puberty(3).
- The worse anxiety alcohol, tobacco, opioids (including prescription pain killers), stimulants like caffeine, cocaine, hallucinogens. Several drugs can cause or worsen anxiety, whether in intoxication, withdrawal or as side effect(4).
- Nervousness problems of anxiety also show the mix of hereditary and natural elements. Different issues that might bring about comparative side effects incorporate hyperthyroidism, coronary illness, caffeine, liquor, or pot use, and withdrawal from specific medications, among others(5).

- Genetically transferring like parent anxiety may put a person at expanded chance of a tension problem(6).
- Genuine or seen risk causes a surge of adrenaline, a chemical and substance courier in the cerebrum, which thusly sets off these uneasiness responses in a cycle called the survival reaction. Certain individuals might encounter this reaction in troublesome social circumstances or around significant occasions or choices(7).
- Fear and anxiety are normal reactions to danger and include behavioral, physiological, emotional, and cognitive aspects. However, these reactions may indicate an anxiety disorder if they occur frequently, intensely, and persistently and cause a great deal of distress or damage in people's lives(8).

### History:-

- Despite having various manifestations, anxiety disorder is identified by the frequency of escape and avoidance actions as well as cognitive and physical symptoms linked to feelings of fear and anxiety(9).
- When anxiety neurosis was separated into panic disorder and generalized anxiety disorder (GAD), the third edition of the Statistical and Diagnostic Manual of Mental Disorders (DSM-III) included the diagnosis of GAD for the first time in 1980. The difference in how these two illnesses responded to imipramine medication allowed for their differentiation. (10)
- Classical literature frequently depicted fear and anxiety, leading to their mythological expressions. (11)
- Anxiety was not recognized as a distinct ailment for a considerable amount of time between classical antiquity and the late 19th century. Additionally, anxiety symptoms played a significant role in the development of new disease theories that culminated in neurasthenia in the 1800s. (12)
- After finishing the arithmetic test, those with ADHD features had higher levels of particular math anxiety and negative affect compared to peers without ADHD, even after controlling for present trait anxiety. (13)
- the degree of consideration apportioned to danger measurably intervened the relationship between physical manhandle and child-reported uneasiness (14)

### Epidemiology:-

- Anxiety disorders accounted for \$46.6 billion in 1990, or 31.5% of all costs related to mental illness. The direct medical treatment of anxiety disorders accounted for less than 25% of the costs. (15)
- As per huge population based reviews, up to 33.7% of the population are impacted by an uneasiness issue during their lifetime. Significant underrecognition and undertreatment of these problems have been illustrated(16).
- A major neurological, mental, or behavioral disorder affects almost 450 million people worldwide, however only a small percentage of them get even the most basic medical services, according to a World Health survey. Research on medicinal plants has advanced steadily globally in the hunt for new medications for the treatment of neurological illnesses, revealing the pharmacological efficacy of several plant species in a number of animal model systems(17).
- A German epidemiological study found that the 18–34 year old age group had the highest 12-month prevalence rates for SAD, GAD, and specific phobia, while the 35–49 year old group had the highest prevalence rates for panic disorder. And in 50–64 age group saw a decline in prevalence rates. The elderly age like 65 to 79 had the lowest of them. It shows that anxiety disorders typically do not permanent into old age, even in the absence of treatment(18).
- Globally, the SARS-CoV-2 (COVID-19) pandemic has led to an increase in anxiety, depression, and other stress-related symptoms. Given individual level factors like self-isolation, lockdown, grief, survivor guilt, and other factors, the reasons for this increase make sense(19).

**Major type of anxiety disorder:**

• Generalized anxiety disorders (GAD):-

-“Most commonly present in early adulthood, 1year prevalence and which shows edginess, restlessness”.

-The American Mental Affiliation presented Stray as a determination in the DSM-III in 1980, when uneasiness despondency was parted into Stray and frenzy problem(20).

-It has likewise been recommended that people with GAD have encountered a more prominent number of minor pressures related occasions throughout everyday life and that the quantity of pressure related occasions might be significant being developed of GAD(21).

• Obsessive-compulsive disorder(OCD):-

-Presents as repetitive instances of disturbing contemplations, pictures, or main thrusts portrayed as obsessions. Ordinary obsessions integrate mercilessness, sexual, socially unapproachable focuses, microbial contamination, and doubt.

- While OCD is viewed as a homogeneous problem according to a neuropsychological viewpoint, a considerable lot of the side effects might be the consequence of comorbid messes. For instance, grown-ups with OCD have displayed more side effects of ADHD and chemical imbalance than grown-ups without OCD(22).

- OCD is 50 to multiple times more normal than recently accepted and two times as normal as schizophrenia or frenzy problem in everyone and this information is gathered from the Epidemiology Catchment Area (ECA) survey(23).

• Panic Disorder (PD):-

- A panic attack is a psychological and behavioral disorder characterized by palpitations, perspiration, shaking, windedness, deadness, or a fear of a terrible event.

-Individuals with panic disorder usually have a series of intense episodes of extreme anxiety during panic attacks. These attacks typically last about ten minutes, and can be as short-lived as 1–5 minutes, but can last twenty minutes to more than an hour, or until helpful intervention is made(24).

- The risks and benefits of the acute and maintenance treatment for panic disorder that are currently available should be weighed against the social and health consequences of the disorder(25).

• Post-traumatic stress disorder (PTD):-

- People presented to extreme injury that undermines actual injury or demise are at critical gamble for creating post-traumatic stress disorder (PTSD)(26).

-But without treatment, the majority of stress reactions will go away in a few days, weeks, or month. A notable percentage of individuals subjected to extreme stressors experience heightened resilience, acceptance, and pot-traumatic growth as a result(27).

• Social anxiety disorder (SAD):-

-Social anxiety disorder is present in half of those who have any social fears(28).

-The defining characteristic of social anxiety disorder (SAD), also known as social phobia, is a persistent dread of being judged by others, which causes the sufferer to avoid social interactions(29).

- Higher anxiety individuals frequently avoid eye contact, make fewer facial emotions, and have trouble starting and carrying on a conversation(30).

• Phobia:-

-Phobia encompass both avoidance and fear. Avoidance can help those with particular phobia feel less distressed and impaired over time(31).

-In 370 phobia, the early onset, additional background information, and result from behavioral avoidance tests were examined. They fit into six distinct categories: dental phobia, animal phobia, claustrophobia, agoraphobia, and social phobia(32).

-Numerous factor can lead to the development of phobias. Phobias may arise due to a variety of factor, including brain chemistry, genetics, traumatic experience from the past, easy life, or learned behaviour. Certain phobias can even run in families and be inherited by subsequent generation(33).

**Drug to Treat Anxiety Disorder:-**

-Several popular classes of anxiety-reducing drugs are available, and their effectiveness in treating anxiety disorders.

**DRUG CLASS:-**

i. Antidepressants have sub classes

↳ Selective serotonin reuptake inhibitors.

↳ Serotonin-norepinephrine reuptake inhibitors.

ii. Benzodiazepines.

iii. Antiepileptics.

iv. Antipsychotics.

**I. Antidepressants:-**

Class:-	Antidepressant SSRI:-	SNRI:-
Drug:-	-Fluoxetine -citalopram -sertraline	-venlafaxine -duloxetine

We investigated the anxiolytic effects of many antidepressant medications, given either acutely or over time, in an animal model of anxiety using novelty-suppressed feeding in rats that were not fed enough food(34).

Anxiety can be indicative of a burdensome disease and energizer medications may really treat such side effects since they effectively treat the basic depress sickness(35).

Further, the resistance involved by Anti-depressant might prompt a higher weakness to melancholy in patients who were never discouraged before as well as to lunacy, especially in more youthful subjects(36).

Side effect:-

-Compared to selective serotonin reuptake inhibitors, tricyclic antidepressants cause more side effects, particularly anticholinergic ones like constipation and Insomnia, vomiting, dry mouth; Venlafaxine is associated with increased perspiration(37).

**II. Benzodiazepines:-**

Class:-	Benzodiazepines
Drug:-	Alprazolam Bromazepam Clonazepam Triazolam Oxazepam Diazepam

-The Food and Drug Administration has accepted eight benzodiazepine derivatives for this use, and they are commonly used to treat anxiety and related disorders(38).

-112.8 million prescriptions for benzodiazepines were filled in the last year; primary care doctors wrote 55% of the prescriptions, psychiatrists wrote 16%, and other specialty doctors wrote the remaining 29%(39).

-Because of their quick onset of action, benzodiazepines are still regarded by many clinicians as effective treatments for anxiety disorders, both in the acute and chronic phases of treatment, despite current guidelines(40).

Side Effect:-

Drowsiness, confusion, dizziness, muscle weakness, memory problem.

**III.Antiepileptics:-**

Class:-	Antiepileptics
Drug:-	Carbamazepine Oxcarbazepine Lamotrigine Valproate

- Anxiety and aggressive disorders can also be successfully treated with anti-epileptics(41).

-Since antiepileptic medications (AEDs) have been effectively used to treat mood disorders, researchers and clinicians have begun looking into the potential uses of AEDs for other psychiatric conditions(42).

- Traditionally, sedative-hypnotic dependence has been treated with antiepileptic medications (AEDs) like phenobarbital to assist patients in safely weaning off of sedatives(43).

- The medical record contained a patient or physician's note of any psychiatric or behavioral adverse effects, such as depression, psychosis, anxiety, suicidal thoughts, impatience, violence, and tantrums(44).

Side effect:-

Apart from the typical adverse effects of antiepileptic medications, such as somnolence, lightheadedness, and cognitive slowness(45).

**IV.Antipsychotics:-**

Class:-	Anti-psycotic
Drugs:-	Alprazolam Clonazepam Diazepam Olanzapine Risperidone

Since they have been shown to be effective in treating a variety of anxiety and depressive symptoms in people with schizophrenia and schizoaffective disorders, atypical antipsychotics like quetiapine, aripiprazole, olanzapine, and risperidone have been used to treat a wide range of mood and anxiety disorders(46).

- The Anti-psychotic drug could affect anxiety in a variety of ways due to their wide-ranging pharmacodynamic effects, though not always or consistently in a positive way(47).

- Atypical antipsychotics are being used more frequently in combination or monotherapy to treat anxiety disorders(48).

Side effect:- dry mouth, dizziness, sedation, fluid retention & weight gain that lead to diabetes.

**Herbal treatment against the side effect:-**

- Ashwagandha for insomnia =

A sleeping disorder is a typical rest problem that can genuinely hurt an individual's physical.

The majority of insomnia medications on the market now have negative side effects. Thus, complementary herbal remedies may prove efficacious in the management of insomnia. An established treatment from traditional Ayurveda, ashwagandha has the necessary potential to alleviate sleeplessness(49).

The effectiveness and safety of ashwagandha extract from roots for anxiety and sleeplessness in comparison to a placebo(50).

The effectiveness of their treatment was assessed based on the following factors: the patient's history of insomnia, sleep-wake patterns, sleep duration, quality of sleep, post-awaken feeling, and related symptoms(51).

- Ginger for vomiting =

Ginger's absorbent, aromatic, and spasmolytic carminative qualities imply that it directly affects the gastrointestinal system. Studies on human subjects in good health indicate that ginger may lessen the nausea brought on by experiments(52).

- Brahmi for confusion =

In traditional medicine, bacopa has been used to treat anxiety. For CNS targeting, a number of therapeutic formulations have been developed. And through its therapeutic effect it is also useful in to treat neuroprotective(53).

- Guduchi for lightheadedness =

Additional helpful as an antioxidant, the giloy plant reduces the body's general oxidative stress(54). Research indicates that Guduchi, possessing immunomodulatory and intelligence boosting qualities, exacerbates neurodegenerative caused by polyglutamine(55).

- Curcuma longa for muscle weakness =

Research in curcuma longa from the past has demonstrated the clinical consequences for people with muscular dystrophy receiving pharmaceutical treatment(56).

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