

Ashwagandha: Everything You Need to Know

This herb used in alternative medicine may help reduce stress

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Withania  *somnifera*  , also commonly as ashwagandha  or winter cherry, is a shrub native to parts of Asia and Africa. It should not be confused with *Physalis alkekengi*, which is also referred to as winter cherry. ^[1]

The ashwagandha root extract has been used for thousands of years as an herbal remedy in [Ayurveda](#), the ancient Indian medical system. ^[2]

Ashwagandha has been traditionally used for [anxiety](#), [insomnia](#), aging, and other conditions that may be exacerbated by [stress](#). This is because ashwagandha is thought to be an [adaptogen](#)  , a substance that may help the body resist stress. ^[1] Ashwagandha may also contain withanolides  , which are thought to have anti-inflammatory and antioxidant properties. ^[3]

and improve [muc function](#). However, scientific evidence supporting these and other uses is poor. ^[4]

This article provides a review of the potential uses of ashwagandha. It also covers possible side effects of the herb, interactions, dosage information, and guidance regarding selecting ashwagandha supplements.

Dietary supplements are not regulated like drugs in the United States, meaning the Food and Drug Administration (FDA) does not approve them for safety and effectiveness before products are marketed. When possible, choose a supplement tested by a trusted third party, such as U.S. Pharmacopeia (USP), ConsumerLab, or NSF.

However, even if supplements are third-party tested, they are not necessarily safe for all or effective in general. Therefore, it is important to talk to your healthcare provider about any supplements you plan to take and check in about potential interactions with other supplements or medications.

Supplement Facts

Active ingredient(s): Withanolides, Withaferin A, steroidal lactones, steroidal alkaloids ^[5]

Alternate name(s): Ayurvedic Ginseng, Indian Ginseng, winter cherry, *Withania somnifera* ^[1]

Legal status: Legal and available over the counter (OTC) in the United States

Suggested dose: Dosing varies; may depend on the brand of supplement or reason for use

Safety considerations: Not enough known about long-term safety; side effects including drowsiness, upset stomach, diarrhea, and vomiting ^[4]

Uses of Ashwagandha

provider. No supplement is intended to treat, cure, or prevent disease.

Varying levels of research have looked at the potential benefits of ashwagandha. Many of the studies on ashwagandha have been performed in laboratory settings or on animal models, but some human trials do exist.

A recent study looked at the health claims and safety of ashwagandha and found that the herb has shown anticancer, anti-inflammatory, heart-protective, liver-protective, and immunomodulatory (able to change the immune system) actions. ^[5]

Researchers from another review concluded that ashwagandha might be useful in conditions such as:

[Schizophrenia](#)

[Chronic stress](#)

Insomnia

Anxiety

[Memory loss](#)

[Obsessive-compulsive disorder \(OCD\)](#)

[Rheumatoid arthritis \(RA\)](#)

[Type 2 diabetes](#)

Male infertility

Studies used in this review included human, animal, and lab research. ^{[1][6]}

With such a long list of claims, it's important to look closely at the research. Some of the more compelling potential uses of ashwagandha are outlined below.

Stress

Ashwagandha is thought to have a positive impact on chronic stress. ^[1] Some research has proven that this may indeed be true.

A recent study out of India compared varying doses of ashwagandha to a

[placebo](#) (sugar pill with no active ingredients), an ashwagandha dose of 250 milligrams (mg) per day or 600 milligrams per day. ^[7]

Of the 58 participants in the study, those who took ashwagandha had reduced levels of [cortisol](#) (a stress hormone) as well as lower perceived stress scores by the end of the eight-week study. Those who took 600 milligrams per day of ashwagandha had better results than those in the 250 milligrams per day group, yet both groups saw improvements in stress. ^[7]

A different study found similar results.

In this investigation, participants took either a placebo or 240 milligrams per day of ashwagandha extract. After 60 days, participants who took ashwagandha reported lower levels of stress and were also found to have reduced cortisol levels. ^[8]

Researchers of the study believed that these results were due to the ability of ashwagandha to moderate the body's stress response. ^[8]

It's worth noting that a drawback of both these studies is that they were performed on small sample sizes. ^{[7][8]} Large-scale studies are necessary to prove ashwagandha's effects on stress further.

Anxiety

In Ayurvedic medicine, ashwagandha has been used for centuries as an alternative treatment for anxiety. Ashwagandha may be used for anxiety due to its perceived anti-inflammatory and antioxidant properties. ^[2]

One systematic review found just five human trials that studied ashwagandha as an anxiety treatment. It was concluded that participants from all five studies found improvements in their anxiety. However, the review noted various limitations of the studies, including study design and potential bias. ^[9]

In comparison, a small human trial published in 2022 showed additional proof that ashwagandha may be helpful for people living with anxiety.

30 days. ^[10]

After 30 days, those who took either dose of ashwagandha self-reported positive effects on their anxiety. ^[10]

Memory

Another traditional use of ashwagandha in Ayurveda is for memory issues.

One clinical trial evaluated how ashwagandha root extract affects memory and overall cognitive function. ^[11]

In this randomized, double-blind, placebo-controlled trial, 125 adult participants were randomized to either 300 milligrams per day of ashwagandha sustained release or a placebo for 90 days. From the study results, researchers concluded that ashwagandha improved memory and focus. ^[11]

Compared to those who took the placebo, participants who took ashwagandha were found to have better visual memory, learning, and attention. ^[11]

Additionally, a pilot study looked at ashwagandha's effects on people with [mild cognitive impairment](#). Participants of this study received either a placebo or 300 milligrams of ashwagandha twice per day for eight weeks. ^[12]

At the end of the study, significant improvements in general memory and immediate memory were seen in the ashwagandha group. ^[12]

Nonetheless, additional large-scale, long-term studies would strengthen these findings.

Related: [Can Supplements Really Boost Brain Health?](#)

Physical Performance

In recent years, some researchers have assessed how ashwagandha may benefit physical performance. Historically, ashwagandha has been thought

According to one study that examined ashwagandha's effect on athletes, ashwagandha may improve both endurance and recovery in healthy adult athletes.

In the study, participants received either a placebo or 600 milligrams per day of ashwagandha for eight weeks. [Aerobic capacity](#) and [recovery](#) were assessed for all participants throughout the study. After eight weeks, statistically significant improvements were seen in both aerobic capacity and recovery for those who took ashwagandha. ^[13]

Another study (a systematic review and meta-analysis) found that ashwagandha may benefit athletes. Twelve studies were included in the final review, and researchers concluded that ashwagandha showed more improvements in physical performance than placebo pills. ^[14]

The specific components of physical performance included strength and power, endurance, and fatigue/recovery. ^[14]

As this is a relatively new area of research, more vigorous studies are needed.

Insomnia

Insomnia is a common sleep disorder that is defined as an inability to get adequate sleep. ^[15] Ashwagandha may be able to help with insomnia. ^[1]

A study compared ashwagandha to a placebo to determine whether the herb would have a positive effect on insomnia.

The study took place over 10 weeks, and participant results were assessed based on [sleep onset latency](#), total sleep time, [sleep efficiency](#), and wake after sleep onset. Significant improvements were seen in all sleep parameters for those who took ashwagandha (300 milligrams twice daily). ^[16]

Similar results were reported in another study that examined ashwagandha's effect on attaining quality sleep.

Per the research, ashwagandha demonstrated small but significant

ashwagandha for at least eight weeks. ^[17]

Moreover, researchers also noted several limitations of the studies included, such as the varying methods used to assess sleep quantity and quality. Safety and adverse events were also not well-reported in the studies used in the review. ^[17]

Ashwagandha (Supplements)

SGAPhoto / Getty Images.

Are There Side Effects of Ashwagandha?

Often, herbs and supplements come with a risk of side effects. Although ashwagandha is mainly considered safe, side effects may be possible. These side effects may be mild or severe. ^[4]

Common Side Effects

Long-term safety studies on ashwagandha are lacking.

An eight-week safety study found that taking 300 milligrams daily of

However, some adverse effects are generally associated with ashwagandha. The most common side effects include: ^[4]

Drowsiness

[Stomach pain](#)/discomfort

[Loose stools](#)

Other less common side effects of ashwagandha include: ^[2]

Excitability

[Hallucinations](#)

[Vertigo](#)

[Nasal congestion](#)

[Cough](#)

Decreased appetite

[Nausea](#)

[Constipation](#)

[Dry mouth](#)

[Hyperactivity](#)

Nighttime cramps

[Blurred vision](#)

[Rash](#)

If you experience side effects when taking ashwagandha, be sure to stop using it and seek advice from a healthcare provider.

Severe Side Effects

In rare cases, the use of ashwagandha may lead to [liver damage](#). ^[1]

A 2020 case study examined five adults who had experienced signs of hepatotoxicity, or toxicity to the liver, after using ashwagandha in varying doses. Among the five cases, ashwagandha dosing ranged from 450 to 1,350 milligrams daily. The liver damage never progressed to [liver failure](#), and most cases were resolved within five months. ^[19]

Researchers from a different study believe that withanone (Win), a

According to their lab study, withanone may interfere with [DNA](#), leading to liver damage. ^[20]

However, these results have not been proven in humans.

Precautions

Some people should avoid using ashwagandha due to safety concerns.

People who are [pregnant](#) or [breastfeeding](#) should not use ashwagandha. Safety studies have not been performed on these populations, so it's best to avoid using ashwagandha altogether while pregnant or breastfeeding. ^[4]

Anyone with upcoming [surgery](#) should stop using ashwagandha at least two weeks prior. There is concern that ashwagandha interacts with anesthesia commonly used in surgery. ^[1]

Ashwagandha may increase thyroid hormone levels. People with [thyroid conditions](#) or who are taking [thyroid medications](#) should talk with a healthcare provider before using ashwagandha. ^[1]

Additionally, ashwagandha may increase [testosterone](#) levels in the body. It is recommended that people with hormone-sensitive [prostate cancer](#) avoid using ashwagandha out of an abundance of caution. ^[4]

Dosage: How Much Ashwagandha Should I Take?

Always speak with a healthcare provider before taking a supplement to ensure that the supplement and dosage are appropriate for your individual needs.

Due to an overall lack of scientific evidence, there are no standard dosage

Ashwagandha dosing may vary by brand or reason for use. Notably, ashwagandha doses typically do not exceed 1,000 milligrams per day for up to 12 weeks. ^[1]

For insomnia, a dose of 600 milligrams per day has been found to be safe and effective. ^[17] This dosing has also been associated with improvements in memory. ^[12]

People using ashwagandha for physical performance may need to take higher doses of up to 1,250 milligrams daily to see benefits. ^[14]

Lower ashwagandha doses of 225 milligrams per day to 400 milligrams per day have been associated with perceived improvements in stress and anxiety. ^[10]

Talk with a healthcare provider about the right ashwagandha dosage for your needs.

What Happens If I Take Too Much Ashwagandha?

Ashwagandha may be toxic to the liver (hepatotoxic). This is according to a recent review of case studies of liver damage caused by ashwagandha.

Per the review, five people experienced liver toxicity after taking varying brands and doses of ashwagandha for different lengths of time. ^[19]

The length of use of ashwagandha ranged from 14 to 110 days, and doses ranged from 450 milligrams to 1,350 milligrams per day. Fortunately, no cases resulted in liver failure, and all recovered. ^[19]

Taking high doses of ashwagandha may increase your risk of side effects. ^[1]

As a general rule of thumb, never exceed the recommended dose of ashwagandha.

Medications?

Ashwagandha may interact with various medications. It may also interact with other herbs, supplements, and even foods.

As with many other herbal supplements, little research is available on possible interactions. However, there is concern that herbs like ashwagandha may have interactions that have not yet been identified.

For this reason, it's always best to tell a healthcare provider if you are taking any medications and/or supplements before starting a new supplement. ^[21]

Some evidence suggests that ashwagandha may interact with: ^[4]

[Medications for diabetes](#)

[Medications for high blood pressure](#)

[Immunosuppressants](#) (medications that suppress the immune system)

Sedatives

[Anti-seizure medications](#)

Thyroid hormone medications

Before starting a new supplement, it is vital that you carefully read the ingredients list and nutrition facts panel to know which ingredients and how much of each ingredient is included in the supplement.

You should also review supplement labels with a healthcare provider to discuss any potential interactions with foods, other supplements, and medications.

How to Store Ashwagandha Supplements

To prolong shelf life, ashwagandha supplements should be stored in a cool, dry place. They should also be kept from direct sunlight and stored in their original bottle or container.

Typically, ashwagandha does not need to be refrigerated, but you should

It's important to keep all supplements out of reach of small children and pets who may accidentally ingest more than they should.

Discard any remaining ashwagandha supplements once they expire or as indicated on the packaging.

Supplements That Are Similar to Ashwagandha

Several supplements and herbs may act similarly to ashwagandha. These supplements may contain similar active ingredients or have potential uses that are like those of ashwagandha.

Supplements that are similar to ashwagandha include:

L-theanine: [L-theanine](#) is a nonprotein amino acid that may have a range of benefits, including stress management. One small trial compared the effects of L-theanine on stress to those of a placebo. After four weeks, a dose of 200 milligrams per day of L-theanine was associated with perceived improvements in stress. ^[22]

Vitamin D: Many studies have looked at the potential relationship between [vitamin D](#) and [mental health](#). In one such study, researchers found that vitamin D supplementation improved anxiety symptoms in people with a vitamin D deficiency. In the study, participants took 1,600 IU (international units) of vitamin D daily for six months. ^[23]

Saffron: Saffron (*Crocus sativus*) is a natural spice with potential health benefits. According to a literature review, saffron may have memory-enhancing abilities. Saffron is thought to have antioxidant and anti-inflammatory properties that help reduce oxidative damage often seen in cognitive degeneration. ^[24]

Tart cherry juice: The juice of tart cherries has been found to contain antioxidants and anti-inflammatory compounds that may aid in exercise recovery. Per a literature review, tart cherry juice has been linked to better recovery after both [strength](#) and endurance training. According to the review, though, tart cherry juice may only be appropriate for athletes already in peak form who are only looking to enhance their recovery. ^[25]

...said to improve sleep for people living with insomnia. In a study on rats, passionflower supplementation was associated with a significant increase in total sleep time. ^[26] Further research is needed to confirm these effects in humans.

It's typically best to take just one supplement or herb at a time for a medical condition. Talk with a healthcare provider about which herb or supplement may be best for you.

FREQUENTLY ASKED QUESTIONS

Is it safe to take ashwagandha every day?

Ashwagandha supplements are meant to be taken every day. ^[4]

Although, it's important to note that long-term studies have not been performed on ashwagandha. This means not enough is known about either the safety or effectiveness of taking daily ashwagandha for an extended period of time.

Ashwagandha is considered safe when taken daily for up to three months. ^[4]

Who should not take ashwagandha?

Ashwagandha isn't right for everyone.

People who are pregnant or breastfeeding should avoid using the herb, as not enough is known about its safety. It is also recommended that people with hormone-sensitive prostate cancer avoid using ashwagandha due to possible hormone changes caused by the herb. ^[4]

People taking certain medications may need to avoid using ashwagandha. This includes: ^[1]

Antidiabetic drugs

Thyroid medications

Are there any side effects of ashwagandha?

As with many other herbs and supplements, ashwagandha has a risk of side effects.

Although side effects do not always occur, you may experience drowsiness, stomach pain, or loose stools when taking ashwagandha. In rare cases, ashwagandha may cause liver damage. ^[19]

What to Look for When Choosing Ashwagandha Supplements

Ashwagandha is not naturally found in foods, which means the only way to get it is through supplements.

Ashwagandha Supplements

Ashwagandha supplements come in various forms, including capsules, gummies, caplets, liquid extracts, and powders. You can also use ashwagandha as an [herbal tea](#). ^[4]

There is no scientific evidence to support one supplement form over another, which means you should choose the one that best fits your lifestyle.

Most ashwagandha supplements are naturally vegan and gluten-free. Be sure to confirm new supplements fit your dietary needs or preferences. Some but not all ashwagandha supplements are [organic](#).

When [choosing a supplement](#), look for a product that has been reviewed and approved by a third-party agency, like USP, NSF International, or

for supplement quality since dietary supplements and herbs are not regulated in the United States. ^[27]

Summary

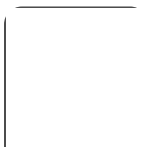
Ashwagandha (*Withania somnifera*) is a natural herb used for centuries in Ayurveda. ^[2]

Some research shows that ashwagandha may provide benefits for stress, anxiety, memory loss, insomnia, and other health conditions. ^{[1][6]}

However, many studies supporting the use of ashwagandha are small or poorly designed.

Ashwagandha and other dietary supplements should never replace standard medicine or care. Always talk with a healthcare provider before starting any new supplement regimen.

27 Sources



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Ashwagandha (*Withania somnifera*) roots and powder in white bowl on wooden background.

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Young adult taking a supplement pill at home

SUPPLEMENTS

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Close up of plant and tree trunk

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ashwagandha root powder on teaspoon

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Man looking at smartphone while lying in bed at night

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