

Literature review

# Adaptogenic plants within food supplement

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**Abstract:** Adaptogenic plants have been recognized for their ability to enhance the body's capacity to adapt and withstand various stressors. This article explores the concept of adaptogens and their role in promoting resilience, tolerance, and adaptation to stress. Plant adaptogens are preferred over synthetic alternatives due to their safety, ability to normalize body functions, and the complex combination of compounds they contain. These natural extracts work synergistically to provide health benefits, unlike isolated compounds. Adaptogens act on multiple levels, modulating immunity, endocrine function, neurotransmitters, and signaling pathways. They help maintain homeostasis and can be used to prevent and manage health disorders resulting from imbalances in the body. The modern lifestyle's increasing prevalence of lifestyle disorders necessitates the consideration of adaptogenic food supplements. These supplements can prevent chronic diseases, improve quality of life, and counteract the declining ability of the body to combat stress. Taking adaptogens in the form of gummies offers distinct advantages, including convenience, compliance, and higher bioavailability. Gummies bypass the liver's first-pass metabolism, ensuring the efficient absorption of active ingredients. As adaptogens are often used long-term, gummies provide a suitable and enjoyable means of incorporating these beneficial plant extracts into daily routines. Choosing high-quality brands is essential for optimal results.

**Keywords:** adaptogenic plants, food supplement, resilience, stress management, gummies.

## Introduction

*“It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change.”* – Charles Darwin.

Darwin rightly noticed that living beings must be adaptable to survive for a long time. Unlike other mammals, humans are intelligent beings. Thus, they can find various ways to adapt and boost their body's capacity to adapt to various stressors.

Humans have long known that certain plants are exceptionally good at boosting the body's ability to adapt, like Rhodiola, Ginseng, and many more. By the mid of the 20<sup>th</sup>-century, the researcher started to develop the concept of adaptogens and study various herbs in clinical studies.<sup>1</sup>

Adaptogens are herbs that increase the body's ability to adapt, resilience, tolerance, and adaptation to stress. Adaptogens are essentially natural extracts derived from plants. However, adaptogens can also be synthetically produced. Synthetic adaptogens are called actoprotectors.<sup>2</sup> For example, vitamins these days can be synthetically produced, and many vitamins boost the body's ability to fight stress and adapt.

## Why use plant adaptogens?

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There are many reasons to prefer plant adaptogens. They are safe and help the body fight stress without increasing energy requirements. It is also vital to understand that adaptogens normalize various body functions. It means that they can fine-tune different body responses. Hence, they can increase or decrease various metabolic processes.<sup>1</sup> That is why adaptogen may help reduce blood pressure but even increase it if needed. In addition, these substances can boost immunity and still help suppress hypersensitivity or fight allergies.

The reason to use plant adaptogens is simple; science cannot create substances as potent as natural adaptogens. Natural adaptogens are quite complex. They contain tens or even hundreds of compounds that act in synergy with each other. Thus, they contain antioxidants, terpenes, stilbenes, lignans, and more.<sup>3</sup>

Natural extracts like Rhodiola or Ginseng are a cocktail of numerous organic compounds. Science still does not know how this cocktail of natural compounds works. Isolated organic compounds from these plants or herbs do not provide much health benefit. To work as an adaptogen, various organic compounds must work in synergy and be present in specific proportions. In what proportions different compounds must be present to act as an adaptogen is nature's best-kept secret.

Adaptogens act on various levels. For example, they might modulate immunity, alter endocrinal function, and may influence the working of neurotransmitters. They might also modulate signaling pathways between the cells in a way that no known synthetic compound can do.<sup>1</sup>

Adaptogens are suitable for regular use. They help maintain homeostasis. That is, they help maintain the body in a steady state even during periods of extreme stress and illness. So, they may be used for preventing ailments. But they are also helpful in managing health disorders, as they essentially occur due to specific imbalances in the body.

## **Modern lifestyle and the importance of adaptogens**

There is a firm scientific reason why everyone must consider taking food supplements containing adaptogens. It is because the human lifestyle has significantly changed in the last century. It means that now people are more likely to die of lifestyle disorders than infections.

Not only that, lifestyle disorders cause significant disability. In addition, these disorders cause a significant decline in quality of life. For example, joint diseases may not kill an individual. Still, they cause much distress, years of disability, and a significant decline in quality of life (QoL).

These days people are more likely to die due to heart disease, stroke, diabetes, Alzheimer's, liver and kidney disease, cancer, and so on.<sup>4</sup> As per WHO, 74% of all deaths occur due to non-communicable/non-infectious diseases.<sup>5</sup> Many of these can be prevented through lifestyle interventions and supplements.

Adaptogens are not just for preventing untimely death or prolonging life. They also help you stay active for longer and enhance your quality of life. These days most adults are living with one or another chronic health issue. Thus, for example, one in four (about 25%) of adults are living with joint pain<sup>6</sup>, about 30% live with depression, anxiety, and stress disorder<sup>7</sup>, and 11%-40% of adults are living with chronic pain at any given time<sup>8</sup>.

There is something common between all these health issues. These health conditions occur or are made worse by the body's declining ability to fight stress and adapt. They are caused by significant oxidative stress, high level of stress hormones, chronic inflammation, and changes in metabolic activity.

Adaptogens can help fine-tune various body functions and thus help prevent these disorders. They can not only help prevent these health issues but also manage these problems. Adaptogens can also exert anti-aging effects, prevent mitochondrial dysfunction, reduce fatigue, and help you feel energized.

## Taking adaptogens as gummies have some distinct benefits

Food supplements come in many shapes and forms. However, among various forms, gummies are perhaps the best way to take natural supplements.

One of the most common complaints about health supplements is that many people fail to experience adequate benefits. There are multiple reasons for it, like lack of compliance and poor bioavailability. Hence, gummies try to overcome these deficiencies.

### Below are some of the distinct benefits of using gummies:

**Convenience and Compliance:** These concepts are interrelated. If a supplement is not convenient to take, one is less likely to take it regularly. Health supplements must be taken regularly to experience their health benefits. Gummies are easy to carry; they can be taken without water; not only that, they have an amazing flavor. Hence, gummies are equally good for children and busy adults. They are even good for adults who find it difficult to swallow pills. Higher compliance always translates into better health effects.<sup>9</sup>

**Higher bioavailability:** It is perhaps an even more important reason to use gummies. Natural extracts have one significant issue – they have low bioavailability when ingested. However, low bioavailability is not only due to poor absorption of natural ingredients but also due to the so-called first-pass metabolism. It means that many natural compounds never reach the bloodstream as the liver neutralizes them after absorption.<sup>9</sup>

Gummies can overcome all these hurdles as they are chewed and broken in the mouth. Their active ingredients are quickly absorbed via the tongue, reaching the bloodstream by bypassing the liver. Whatever is left is ingested and absorbed via the intestine like other health supplements.

Gummies are the perfect way to take adaptogens, considering that adaptogens must be used for a long. Food supplements containing adaptogenic plants or extracts are made in such a way that they are suitable for regular use for years. Of course, not all gummies are created equal, and thus it is vital to choose high-quality brands.

## Conclusion

In conclusion, adaptogenic plants within food supplements offer a natural and effective way to enhance the body's resilience and ability to adapt to stress. These plant extracts, such as Rhodiola and Ginseng, contain a complex combination of compounds that work synergistically to normalize various body functions. Unlike synthetic alternatives, natural adaptogens are safe and can fine-tune metabolic processes without increasing energy requirements. In today's modern lifestyle, where lifestyle disorders are prevalent, incorporating adaptogens into daily routines becomes crucial for preventing and managing chronic diseases. Gummies, as a convenient and compliant form of supplementation, offer higher bioavailability, ensuring the efficient absorption of active ingredients. By harnessing the power of adaptogenic plants and utilizing gummies as a delivery method, individuals can optimize their health, improve their quality of life, and better adapt to the challenges of the modern world.

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