

# Humic Insights

## Understanding Key Benefits for Immunity, Detoxification, and Longevity



Have you heard about Shilajit and its incredible health benefits? If yes, then it is vital to understand that most of its health benefits of Shilajit are due to Humic substances. Studies show that Shilajit contains 60-80% of Humic substances. One of the major Humic substances is Humic.<sup>1</sup>

In recent years, researchers have been studying Shilajit extensively to understand how it works and what makes it such an effective health supplement. During years of research, they have identified numerous organic compounds, minerals, and even vitamins in Shilajit. Studies also show that Shilajit is rich in Humic Acid and Fulvic Acid. These two acids appear to be primarily responsible for the health benefits people experience when consuming Shilajit.

Since Humic appears to exert the health benefits of Shilajit, researchers have also been trying to isolate it and use it for health benefits. Modern science has enabled the extraction of 100% Pure Humic.

Of course, here it is vital to understand that Shilajit is not the only source of Humic. The incredible organic compound Humic is formed due to the decomposition of plant and animal matter over an extended period of time. Thus, it is also found in small amounts in soil, peat, coal, and so on.

This comprehensive review will explore all possible health benefits of this amazing and beneficial organic compound, Humic.

### Chemical Structure and Properties

Humic is characterised by its high molecular weight and complex structure, and is rich in aromatic and aliphatic components. It contains various functional groups, including carboxyl, phenolic, hydroxyl, and quinone moieties, which confer its unique chemical properties. These groups enable Humic to chelate metal ions, scavenge free radicals, and interact with biological membranes, influencing various physiological processes.<sup>2</sup>

### Health Benefits of 100% Humic

#### Antioxidant Activity

Humic exhibits significant antioxidant properties, primarily due to its phenolic and quinone groups. These functional groups can donate electrons to neutralise reactive oxygen species (ROS), thereby protecting cellular components from oxidative damage. Studies have demonstrated that Humic can enhance the activity of endogenous

antioxidant enzymes, such as superoxide dismutase and catalase, further contributing to its protective effects against oxidative stress.<sup>3</sup>

In practice, this means Humic can be used to prevent chronic health issues or even manage various health conditions. Not only that, one does not have to be living with a disease condition to enjoy the health effects of Humic, as antioxidants are known to boost well-being.<sup>3</sup>

### Anti-Inflammatory Effects

Chronic inflammation is implicated in various diseases, including cardiovascular disorders, diabetes, and neurodegenerative conditions. Humic has been shown to modulate inflammatory responses by inhibiting the production of pro-inflammatory cytokines, such as tumour necrosis factor-alpha (TNF- $\alpha$ ) and interleukins. Additionally, Humic can suppress the activation of nuclear factor-kappa B (NF- $\kappa$ B), a key transcription factor involved in the inflammatory cascade.<sup>4</sup>

Studies show that Humic can help lower both systemic and local inflammation. Thus, it can be good for managing systemic diseases like diabetes, heart disease, and autoimmune conditions. However, Humic is also good for managing local inflammation like that found in osteoarthritis.<sup>4</sup>

### Immune System Modulation

Humic influences both innate and adaptive immune responses. It can stimulate the proliferation and activity of immune cells, including macrophages, natural killer cells, and lymphocytes. Moreover, Humic has been observed to enhance the production of immunoglobulins, thereby strengthening the body's defence mechanisms against pathogens.<sup>5</sup>

Although there is a need for more research into the practical implications of its immune-modifying properties, in theory, Humic can help fight seasonal infections, overcome allergies, and even help prevent flares of autoimmune disorders.<sup>6</sup>

### Antiviral Properties

Emerging research suggests that Humic possesses antiviral activity against a range of viruses. Humic can interfere with viral replication and inhibit the attachment of viruses to host cells. These effects are attributed to Humic's ability to bind to viral particles and block their interaction with cellular receptors. At least, experimental studies suggest that Humic can prevent replication of various viruses like those causing influenza, herpes infection, and much more.<sup>7</sup>

### Detoxification and Heavy Metal Chelation

Humic's chelating properties enable it to bind with heavy metals, such as lead, cadmium, and mercury, forming stable complexes that are excreted from the body. This

detoxifying effect reduces the bioavailability of toxic metals, minimising their harmful impacts on health. Furthermore, Humic can adsorb various toxins and pollutants, facilitating their removal from the gastrointestinal tract.<sup>8</sup>

In practice, one can use Humic supplements frequently to maintain optimal health and detoxify. Humic may also help overcome fatigue, body aches, sleep issues, poor health, and low immunity, particularly when the causes of such health issues are difficult to identify.<sup>8</sup>

## Gastrointestinal Health

Humic contributes to gut health by modulating intestinal microbiota composition. It promotes the growth of beneficial bacteria, such as *Lactobacillus* and *Bifidobacterium* species, while inhibiting pathogenic microbes. Additionally, Humic enhances the integrity of the intestinal barrier, reducing permeability and preventing the translocation of harmful substances into the bloodstream.<sup>9</sup>

## Neuroprotective Effects

Oxidative stress and inflammation are key factors in neurodegenerative diseases. Humic's antioxidant and anti-inflammatory properties may show neuroprotective benefits. Animal studies have indicated that Humic can improve cognitive function and reduce neuronal damage in models of neurotoxicity.<sup>10</sup>

In practice, it means that Humic may lower the risk of health issues like dementia and Parkinson's. However, it is worth noticing that, at present, most evidence comes from experimental studies. Further, Humic may also help boost focus and learning, and may additionally be good for emotional well-being.<sup>10</sup>

## Renal Protection

Humic has demonstrated protective effects against nephrotoxicity induced by certain drugs and toxins. Humic can attenuate renal inflammation, reduce oxidative stress, and preserve kidney function. These findings suggest potential therapeutic applications of Humic in preventing or mitigating kidney damage.<sup>11</sup>

## Skin Health and Wound Healing

Topical application of Humic has been associated with improved skin health and accelerated wound healing. The antimicrobial properties of Humic help prevent infections, while its anti-inflammatory effects reduce swelling and promote tissue regeneration. Humic may also stimulate collagen synthesis, enhancing skin elasticity and repair.<sup>12</sup>

## Bone Health

Preliminary studies suggest that Humic may support bone health by enhancing calcium

absorption and influencing bone metabolism. Its role in modulating inflammatory cytokines also contributes to Humic maintaining bone density and reducing the risk of osteoporosis.<sup>13</sup>

These are just some of the well-known incredible health benefits of Humic. Science is still exploring its health effects. Humic is mild on the body, which means that one does not have to be living with ailments to enjoy its health effects. Its supplementation is also associated with longevity.

## Mechanisms of Action

The diverse health benefits of Humic are attributed to its complex structure and multifaceted mechanisms:

- **Free Radical Scavenging:** Neutralises Reactive Oxygen Species (ROS), protecting cells from oxidative damage.<sup>3</sup>
- **Metal Chelation:** Binds to heavy metals, facilitating their excretion and reducing toxicity.<sup>8</sup>
- **Immune Modulation:** Regulates cytokine production and enhances immune cell activity.<sup>5</sup>
- **Microbial Interaction:** Modulates gut microbiota composition and inhibits pathogenic organisms.<sup>9</sup>
- **Anti-inflammatory Action:** Suppresses inflammatory pathways and mediators.<sup>4</sup>

## Safety and Side Effects

100% Humic and Humic is generally considered safe when consumed in appropriate amounts. However, some individuals may experience mild gastrointestinal discomfort, such as nausea or diarrhea, particularly at high doses. It is advisable to consult a healthcare professional before initiating Humic supplementation, especially for individuals with underlying health conditions or those taking medications.

## The Bottom Line

100% pure Humic and Humic offers a wide array of health benefits, ranging from antioxidant and anti-inflammatory effects to immune modulation and detoxification. Its complex structure enables interactions with various biological systems, contributing to overall health and well-being.

While further clinical research is warranted to fully understand its mechanisms and therapeutic potential fully, current evidence supports the incorporation of Humic as a valuable supplement in health promotion strategies.

## References

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