NutraMedix

Japanese Knotweed

Applications

- Microbial Support
- Healthy Inflammatory Response Support
- Antioxidant Support
- Immune Support
- Cardiovascular Support
- Blood Glucose Support

Introduction

NutraMedix Japanese Knotweed is a hydro-ethanol extract from **Japanese knotweed root** (*Polygonum cuspidatum*), which belongs to the Polygonaceae family. Other Latin synonyms include *Fallopia* or *Reynoutria japonica*.[1]

Japanese knotweed root has been used for centuries in traditional Asian health practices, where it is known as itadori in Japan, hu zhang in China, and ko jo kon in Korea.[2-4] The first known written mention of Japanese knotweed root for health support is in the Miscellaneous Records of Famous Physicians by Tao Hong-Jing in 500 CE.[4]

Chemical constituents include stilbenes such as resveratrol, anthraquinones such as emodin, flavonoids, and other phenolic compounds.[1,5-8] The main polyphenolic compounds in knotweed roots are resveratrol and its glucosides—polydatin and resveratroloside.[3]

NutraMedix Japanese Knotweed is made at our U.S. manufacturing facility using a specialized proprietary extraction process that optimizes the constituents of the herbs in their original, unprocessed state to obtain broad-spectrum concentration. Because our extracts are made in our own facility, we control all aspects of quality, including stringent ID testing, microbial testing, and heavy-metal testing. NutraMedix rigorously follows current good manufacturing practices (cGMP), as do our suppliers.

Microbial Support

Japanese knotweed root (*P. cuspidatum*) may help with a variety of microbial support.*[6,9-13]

Healthy Inflammatory Response Support

Japanese knotweed root (*P. cuspidatum*) may assist with healthy inflammatory response support.* In a study with 20 healthy male basketball players, the participants were randomly assigned to either 200 mg Japanese knotweed root extract standardized to 20% trans-resveratrol or to a placebo, daily for six weeks, with inflammation indices measured at baseline and at 6 weeks. At the end of the study, compared to the placebo group, the Japanese knotweed group had noticeable support for a healthy inflammatory response, maintaining TNF-alpha and IL-6 already within the normal range.*[14]

In a placebo-controlled trial, 20 healthy participants were randomly assigned to Japanese knotweed root extract (containing 40 mg resveratrol) or a placebo, daily for 6 weeks. Fasting blood samples were drawn at baseline, 3 weeks, and 6 weeks. At the study's end, compared to the placebo group, the resveratrol group experienced noticeable support of TNF-alpha, IL-6, and CRP already within the normal range.*[15]

In a mouse study, mice were randomly assigned to Japanese knotweed root extract (50 mg/kg, 100 mg/kg, or 200 mg/kg), a pharmaceutical comparator, or a placebo, once per day for 16 days. The Japanese knotweed groups experienced notable support for a healthy Th1/Th2 ratio, offering healthy inflammatory response support.* Japanese knotweed root also supported normal function of the IL-33/TSLP/NF-kappaB pathway, further supporting a healthy inflammatory response.*[16] In rat studies, the healthy inflammatory response support was attributed to 8-*O*-beta-glucopyranoside.*[5] A molecular docking study found Japanese knotweed root to help maintain IL-1-beta already within the normal range.*[17]

Antioxidant Support

In a rat study, **Japanese knotweed root** (*P. cuspidatum*) extract helped maintain superoxide dismutase activity and gastric glutathione levels already within the normal range, with benefits attributed to the antioxidant constituent resveratrol.*[18]

Resveratrol derivatives have slow-acting antioxidant effects, as measured by DPPH radical scavenging activity.*[3] In a study using a 50% ethanol Japanese knotweed root extract, the antioxidant activity was attributed to constituent phenolic compounds.*[19]

Immune Support

Japanese knotweed root (*P. cuspidatum*) may assist with healthy immune support.* In a mouse study, the mice were given 0 mg/kg, 50 mg/kg, 100 mg/kg, 150 mg/kg, or 200 mg/kg of Japanese knotweed root extract daily, for three weeks. Compared to the control group, the Japanese knotweed group experienced support for T cell, monocyte, and macrophage numbers as well as macrophage and NK cell activity already within the normal range.* In addition, it supported B cell numbers already within the normal range.*[20]

Other Support

Cardiovascular Support

Japanese knotweed root (*P. cuspidatum*) may help with cardiovascular support.*[21] In a laboratory study using gas chromatography and liquid chromatography-mass spectrometry, Japanese knotweed root and its constituents, including resveratrol, helped support levels of total cholesterol, LDL cholesterol, and triglycerides, already within the normal range.*[2] Further studies have attributed Japanese knotweed root's lipid support to the PI3K/AKT/FOXO3 signaling pathway.*[22]

Healthy Blood Glucose Support

Japanese knotweed root (*P. cuspidatum*) may assist with healthy blood glucose support.* In a laboratory study, several compounds with the potential to support alpha-glucosidase and protein-tyrosine phosphatase 1B already within the normal range were isolated.*[23] Other studies have found that resveratrol derivatives such as resveratroloside help maintain levels of alpha-glucosidase already within the normal range.*[3]

Safety and Cautions

Japanese knotweed root (*P. cuspidatum*) is generally well tolerated when taken as directed, though more research is needed. It should be avoided during pregnancy or breastfeeding due to insufficient safety data in these conditions. Consult a physician before use if you are taking anticoagulant or antiplatelet drugs. Theoretically, Japanese knotweed may inhibit the effects of estrogen replacement therapy. Theoretically, it may also increase levels of drugs metabolized by cytochrome P450 (CYP1A1, CYP1A2, CYP1B1, CYP2C19, CYP2E1, or CYP3A4).[1]

Safety is not documented in breastfeeding or pregnant women, or in children under age 3, due to insufficient safety research.

*This statement has not been evaluated by the Food and Drug Administration. This product is not intended to treat, cure, or prevent any diseases.

References

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