

## Ashwagandha – 600 mg

### **Introduction**

Ashwagandha (*Withania somnifera*), also known as Indian ginseng, has a long history of use by Ayurvedic practitioners for a wide range of ailments including cardiovascular, hepatic, and respiratory diseases, with many bioactive components and a broad spectrum of physiological effects.<sup>1</sup> More than 12 alkaloids and 40 withanolides have been isolated, and the active constituents in the root alone include vitoindosides VII and VIII, sitoindosides IX and X, withanine, withananine, viscosa lactone-B, stigmasterol, and ashwagandhanolide.<sup>2</sup> These many bioactive components help explain its diverse physiological actions, as it has been shown to be cardio- and neuroprotective, anti-inflammatory and anxiolytic, as well as anti-arthritic and antioxidant.

### **About Ashwagandha KSM-66®**

KSM-66 is an organic proprietary extract of ashwagandha made entirely from the root of the plant, extracted without chemical solvents or alcohol, with multiple randomized clinical trials supporting clinical efficacy that parallels traditional use. Additionally, this formula uses dairy-free KSM-66.

### **Stress and well-being**

In a randomized, double-blind clinical trial, participants with chronic stress reported a significant reduction in several stress-assessment scale scores (DASS, GHQ-28, PSS) after 60 days when receiving KSM-66, compared to placebo, as well as a significant reduction in serum cortisol levels.<sup>3</sup> A second controlled trial with overweight/obese participants with chronic stress also found that KSM-66 improved stress scale scores and cortisol, as well as measures of well-being and happiness, food cravings, reactive eating, and body weight over an eight-week period.<sup>4</sup>

### **Sleep, memory, and cognitive function**

When given to men and women aged 65–80 over a 12-week period, significant increases in quality of sleep and mental alertness were observed compared to placebo.<sup>5</sup> In a placebo-controlled eight-week trial conducted among adults with mild cognitive impairment, individuals receiving KSM-66 had significant improvements in both immediate and general memory, as well as executive function, sustained attention, and information-processing speed.<sup>6</sup>

A controlled trial with KSM-66 also found an improvement in sleep quality and sleep onset latency among participants with insomnia.<sup>7</sup> A second trial confirmed these results, finding improvements in sleep among healthy adults and individuals with insomnia, with greater effects in the latter.<sup>8</sup>

### **Cardiorespiratory fitness and muscle strength**

Healthy athletic adults supplemented with KSM-66 had a statistically significant improvement in  $\text{VO}_2$  max after an eight-week trial when compared to placebo. Additionally, there were significant improvements in serum antioxidant capacity as well as scores related to stress, fatigue recovery, and energy levels.<sup>9</sup> In a second study, participants were young men beginning a resistance exercise training program. Participants receiving KSM-66 had a significantly greater increase in muscle mass and strength, as well as improvements in body fat percentage and markers of exercise-induced muscle damage compared to placebo, over an eight-week period.<sup>10</sup>

### **Sexual function and HPT axis**

Among men with oligospermia, supplementation with KSM-66 significantly increased sperm count, motility, and semen volume compared to placebo, as well as LH and testosterone levels.<sup>11</sup> In healthy women meeting the criteria for female sexual dysfunction, KSM-66 was found to improve scores in the Female Sexual Function Index (FSFI) and the Female Sexual Distress Scale (FSDS), including improvements in arousal, lubrication, orgasm, and satisfaction over an eight-week period, compared to placebo.<sup>12</sup> Finally, in a prospective and controlled trial, KSM-66 supplementation significantly improved serum TSH, T3, and T4 levels in a population with subclinical hypothyroidism over an eight-week period.<sup>13</sup>

## General Recommendations and Dosing

Take 1 capsule per day or as directed by a health care practitioner. KSM-66 is generally well tolerated, with no direct contraindications. Safety has not been clearly established during pregnancy, and a rise in testosterone suggests caution in the presence of hormone-sensitive cancers.

## Drug Interactions

It has no direct drug interactions, but may have a hypoglycemic effect that should be monitored when taken concomitantly with diabetes medications.<sup>14,15</sup>

### REFERENCES:

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