

# CILI Weight Loss Spray

Appetite Suppressant – Powerful Fat Burner – Increase Mental Focus

The epidemic of obesity is not a simple medical or scientific problem. The more we know about weight control, the more complex it has become. An individual's weight can be controlled by genetic and epigenetic factors as well as by numerous not-yet-understood networks that include hormones such as:

- Leptin: made primarily by adipocytes and cells within the small intestine. Leptin inhibits hunger, among other functions. Decreased sensitivity to leptin, also known as leptin resistance, appears to be one of the main driving factors in obesity. Leptin levels are directly related to the amount of fat in the body. Leptin acts on specific neurons in the brain to regulate appetite, perception of hunger and metabolic rates. When the amount of fat carried by an individual is decreased, blood leptin levels fall. This decrease in leptin levels stimulates appetite and suppresses energy expenditure until the fat level is restored. When the amount of fat an individual carries increases, leptin levels increase. This increase in leptin levels suppresses appetite until weight is lost. This system represents the body's attempts to retain fat, a major energy source, for times of necessity. However, with continued obesity, leptin acts as an inflammatory substance with resulting decreased sensitivity to leptin and increased resistance to the effects of leptin in a manner similar to that seen with increasing insulin resistance in diabetes. <sup>1,2,3</sup>
- Adiponectin: made also by adipocytes but acts in a manner complementary to leptin. Adiponectin plays a role in regulating levels of blood sugar and the oxidation of fatty acids. Adiponectin increases when leptin levels decrease (or when leptin sensitivity increases) and decrease when leptin levels rise (and leptin resistance increases), as is often seen in obesity. <sup>4,5,6</sup>
- **Ghrelin** is another "hunger hormone" and increases food intake. Ghrelin can stimulate the production of neuropeptide Y from areas of the brain and participates in the "reward" system for food intake.

To put it another way, weight loss is about much more than calories and exercise.

This formulation approaches weight control by addressing three main hormones—leptin, adiponectin, and ghrelin. Using our proprietary Aquaceutical Nano Technology we put together the perfect combination of elite adaptogens, herbs and nutraceuticals along with CBD, CBG. Additionally, we added our proprietary mineral, glycobiological, & mitochondrial blends to positively support weight loss and overall well-being.



# **Key Ingredients**

#### Irvingia gabonensis



*Irvingia gabonensis* is also known as the African mango tree and is indigenous to Central and Western Africa. Traditionally, the bark, seeds, roots and leaves have been used to treat pain and infections. More recently, however, *Irvingia gabonensis* seed extract has been investigated in combination with an extract of *Cissus quadrangularis* in weight loss and the control of obesity. The

combination was found to function synergistically to improve body weight and waist and hip circumferences. In addition, positive effects were noted regarding levels of blood sugar, cholesterol, and hormones such as leptin and adiponectin. <sup>7,8,9</sup> *Irvingia gabonensis* seed extract appears to specifically target the PPAR  $\gamma$  gene (peroxisome proliferator-activated receptor) a gene that has been implicated in leptin-resistant obesity.<sup>7,9</sup> *Irvingia gabonensis* seed extract inhibits the formation of new fat cells by targeting and downregulating the PPAR  $\gamma$  gene as well as the gene for leptin and by upregulating the gene for adiponectin, another hormone involved in obesity and which functions in part by regulating glucose levels and the breakdown of fatty acids. <sup>9,10</sup>

#### Cissus quadrangularis



*Cissus quadrangularis* is a member of the grape family and is native to India. The plant has been safely used in Ayurvedic medicine for centuries as a tonic, as a pain reliever and to help heal broken bones.<sup>11</sup> *Cissus quadrangularis* is a rich source of Vitamin C, Vitamin A precursors and a variety of anti-inflammatory, antiviral, anti-diabetes and liver protecting triterpenoids including betulinic and oleanolic acids. *Cissus quadrangularis* also is a rich source of a resveratrol derivative, Quadrangularin A.<sup>12</sup> Most recently, *Cissus quadrangularis* has been found to be effective in

reducing body weight, managing central obesity and managing metabolic syndrome, a disorder that predisposes to diabetes and heart disease and is most often associated with obesity.<sup>13</sup> *Cissus quadrangularis* has also been shown to be effective in managing insulin resistance, a prediabetic condition and to lower blood glucose levels. <sup>14</sup> While the mechanism of action of extracts of *Cissus* is unknown, a number of different reports suggest that levels of the hormone leptin may be directly affected, as may be the degree of leptin sensitivity of specific leptin receptors in the brain.<sup>10</sup>



## Coix lacryma-jobi (Job's Tears) Seeds

*Coix lacryma-jobi* is also known as Job's Tears and is an annual grass that is used in Asia as a basic grain. In animal models of obesity, extracts of seeds have been found to inhibit hunger, decrease body weight, adipose mass as well as both leptin and cholesterol (total and LDL) levels.<sup>15,16</sup> The seed oils include palmitic, stearic, oleic, and linoleic fatty acids while other compounds include plant sterols, likely the source of the cholesterol lowering effects.



## Garcinia Cambogia



*Garcinia Cambogia* is a fruit-producing tree native to Southeast Asia. The rind of the fruit is rich in hydroxycitric acid (HCA). HCA inhibits the enzyme ATP citrate lyase, which plays a role in the conversion of carbohydrates to fats and cholesterol. HCA also increases serotonin levels—this is believed to help reduce appetite. <sup>17,18</sup>

# Curcuma longa/curcumin (Turmeric)

Curcumin is a spice that has been used for millennia in Asian foods and as a medicine in the Ayurvedic tradition. Curcumin (turmeric) is an antiinflammatory herb and appears to inhibit COX-2 enzymes and other inflammatory agents.<sup>19</sup> In studies examining weight loss in animal models, curcumin use resulted in decreases in blood leptin levels associated with a decrease in total body fat.<sup>20</sup> Also, in an obese animal model, curcumin reduced weight and the volume of adipocytes; blood sugar, insulin, leptin, and TNF-alpha were also reduced.<sup>21</sup> In fact, weight loss has been one of the more frequently reported side effects of the use of curcumin.<sup>54,55</sup>



## Harpagophytum procumbens (Devil's Claw)



*Harpagophytum procumbens* is a plant native to South Africa that has traditionally been used for weight management and pain relief. It has anti-inflammatory properties and a recent animal study indicated that components of the plant activate the ghrelin receptor and decreased appetite in mice. <sup>22</sup> Other recent studies have indicated that Devil's claw increases secretion of another hormone, CCK, potentially via a ghrelin-dependent mechanism<sup>23</sup> or via a peptide hormone, obestatin derived from the stomach.<sup>24</sup>



# Conjugated Linoleic Acid (CLA)

CLA is a polymer of linoleic acid, a polyunsaturated essential fatty acid found in plant oils. It is an omega-6 fatty acid. CLA is believed to reduce body fat by promoting the catabolism of fats and the programmed cell death (apoptosis) of adipocytes. CLA may also function by reducing fat accumulation by inhibiting enzymes in adipocytes. CLA may also activate PPAR- $\gamma$  and stimulate the production of proinflammatory cytokines. These functions appear to decrease fat deposition, clinical results are promising, but still somewhat contradictory.<sup>25</sup>



## Acetyl I-Carnitine



Acetyl -l-carnitine is a non-protein amino acid derivative naturally found in humans. It is found in the brain, liver, and kidneys and is derived from the amino acids, methionine and lysine. The main function of acetyl-lcarnitine is to transport long-chain fatty acids across the mitochondrial inner membrane, allowing the mitochondria to convert the fatty acids into energy. In a recent meta-analysis, supplementation with acetyl-lcarnitines has been shown to have positive effects on weight management in obese and overweight individuals.<sup>26</sup>

Acetyl-L-Carnitine

# Morus Indica (Japanese White Mulberry Leaf Extract)

Highly regarded in traditional Chinese and Japanese medicine, previous research centered on its considerable benefits in improving blood sugar control and blood lipids. A recent study has shown that an extract from the leaves of the mulberry plant *(Morus indica)* provides a range of benefits for those who are overweight. Studies have shown that it possesses significant blood sugar lowering effects, as it contains a "sugar blocker" (specifically an alpha-glucosidase inhibitor), along with other compounds that appear to improve blood glucose control as well as blood lipids (cholesterol and triglycerides). 27





### Satiereal Saffron Extract



Saffron is the most expensive spice in the world. It originated in Greece, where it was revered for its medicinal properties. People would eat saffron to enhance libido, boost mood, and improve memory. According to research Saffron may prevent snacking by curbing the appetite. In one study, women taking saffron supplements felt significantly fuller, snacked less frequently, and lost significantly more weight than women in the placebo group 28. In another study, taking a saffron extract supplement helped significantly reduce appetite, body mass index (BMI), waist circumference, and total fat mass.

## CBD & CBG

CBD & CBG are elite compounds of the cannabis plant. Known as superfoods, they are non-intoxicating and have enormous therapeutic potential. They are high in protein, containing all 20 amino acids, including the 9 essential amino acids. They have the perfect ration of omegas 3, 6, 9, and contain vitamins A, B1, B2, B3, B6, C, E and many key minerals. CBD & CBG have a positive



effect on the body's endocannabinoid system and recent studies show that they have the potential for helping people shed excess pounds. One studied concluded CBD might be used as therapy for treating obesity and metabolic syndrome because it reduces lipid levels. 29 Researchers also report that CBD helped regulate cravings for certain foods which helped people reach a healthy weight. 30 Additional studies have shown that both CBD and CBG worked to reduce the appetites of lab rats. 31CBD may also play a role in converting unhealthy white fat into brown fat and stimulate the body to break down fats and burn calories more effectively. 32



#### Doctor Formulated – Clinical Grade – Nano Concentrate – Zero THC

#### Serving Size: 9 Full Sprays

Serving Per Container: 30 (one-month supply)

**Directions:** Spray 3 sprays in the mouth or under the tongue 3 times a day, or when you feel the urge to snack. Let spray rest in your mouth for 30 seconds before swallowing. For additional results use 20 - 30 minutes before meals.

This product is not a treatment for obesity and is not a replacement for a healthy diet and regular exercise. A person who adds this product to their weight loss plan without also exercising and eating healthfully may not see any benefits. At best, people can consider this product as a complementary supplement. Not all bodies are the same, and each person may need a slightly different dose.

These statements have not been evaluated by the food and drug administration. This product is not intended to diagnose, treat, cure or prevent any disease.

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