

## Fighting Fat With Coffee Fruit

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Several epidemiologic studies have shown that a three- to four-cup daily consumption of coffee, whether caffeinated or decaffeinated, reduces the risk of developing insulin resistance, metabolic syndrome and type 2 diabetes, as well as being effective in weight management.<sup>1-3</sup> The science strongly suggests that the phytonutrient chlorogenic acid is the [major reason for these effects](#).<sup>4</sup> Chlorogenic acid is also found in high amounts in cherries and plums, but [coffee is its greatest dietary source](#).<sup>5</sup>

Of course, levels of the phytonutrient will vary widely in different processed roasted coffee beans. Still, the dried raw green bean of the coffee fruit, especially the Robusta bean, is the richest source.

*In vitro* studies show that chlorogenic acid (5-caffeoylquinic acid) inhibits glucose uptake in the small intestine, while also inhibiting the enzyme glucose-6-phosphatase, which [intervenes in blood glucose regulation](#).<sup>6</sup> Doing so shuts down the glucose pathway, causing the body to burn fat and use it as energy.

Nonetheless, scientists emphasize the synergic effect of coffee's components rather than one constituent. Fortunately, an all-natural water-soluble extract of raw, decaffeinated green coffee beans can be obtained by a traditional extraction method. This is important, as up to 70 percent of chlorogenic acids can be destroyed by roasting. Raw, dried, green coffee-fruit extracts can now be utilized as an ingredient in nutraceuticals and functional foods and drinks.

A high-quality, standardized extract of 400 mg has the chlorogenic content of up to seven cups of coffee, yet is free of some of the harmful acids in coffee (cafestol and kahweol), with only 25 percent of the caffeine. Raw green coffee bean extracts also contain quinic and caffeic acid, which possess strong antioxidant power, notably limiting the oxidation of lipids in the liver.<sup>7,8</sup> Indeed, raw green coffee beans have approximately [twice the antioxidant power](#) of chocolate.<sup>9</sup> The extracts have been tested with an oxygen absorbance capacity rating (ORAC) of almost 9,000 per gram.

In a recent [clinical study](#) using 400 mg of green coffee bean extract versus a placebo and involving 50 people,<sup>10</sup> participants who received the bean extract lost 5.7% of their initial weight after 60 days of supplementation, corresponding to an average weight loss of 11 pounds. The placebo group lost 2.8 percent of initial weight. These effects are believed to be related to the reduction of up to half of post-prandial glycemia, secondary to a decrease of intestinal glucose absorption and an inhibition of glucose-6-phosphatase, as well as an increase of the release of energy stored as fatty acids in adipose tissue.

Based on this information, it is easy to make a latte with significant amounts of coffee antioxidants to support healthy blood sugar levels and healthy weight-loss programs. The recipe is as follows:

- Brew 8 ounces of a robust, bold coffee blend (caffeinated or decaf).

- Blend 8-10 grams of whey protein powder and ¼ tsp cinnamon with 2-4 ounces milk.
- Stir cinnamon, milk and whey blend into coffee.
- If added sweetness is desired, add stevia to taste.

The strong coffee provides a significant amount of chlorogenic acids and, if caffeinated, boosts metabolism. The lean protein from whey has a strong satiating effect. This will be even stronger if the whey protein also provides fiber. The herb cinnamon is an insulin mimetic, meaning it works like insulin. Specifically, it tends to [lower insulin resistance](#) that occurs at cell walls, allowing our own natural insulin to get sugar inside cells to burn for energy.<sup>11</sup> And stevia, a natural, zero-calorie sweetener made from crystallized stevia leaves, has produced fair evidence that it helps support healthy blood sugar levels. Enjoy hot or cold!

### References

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