

Garcinia Cambogia: How to Optimize Effects

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Overweight/obesity is generally accepted as a worldwide epidemic with troublesome consequences. While the general public is most distraught with their overall appearance, excess fat accumulation is associated with a number of serious chronic health disturbances including diabetes and atherosclerosis. Whatever the health benefits, lots of individuals are looking for a magic bullet to improve their results on the scale and in front of the mirror.

Over the last few months, use of *Garcinia cambogia* extract produced from the Malabar tamarind for weight loss has received considerable publicity via television and the Internet that has, in turn, led to enthusiastic public acceptance. Weight loss is a scientifically confirmed usage for this traditional flavoring component and foodstuff. Use of the Malabar tamarind in cooking in the western coastal cities of India and Sri Lanka has continued for centuries, suggesting that safety should not be an issue, a point confirmed by numerous recent reviews. The fruit is used to create a sour, fruity tang in gravies. Interestingly, where Westerners use sweet fruits to flavor yogurt, Indians often will add a dollop of Malabar tamarind instead. Importantly, in addition to the fact that Malabar tamarind tastes great for these purposes, the fruit also makes food more satisfying, giving an early sense of having had enough to eat (satiety).

Studies in the 1960s and '70s showed that the rind of the Malabar tamarind contains a unique biochemical—hydroxycitric acid (HCA). Studied in well-established research laboratories, this biochemical was found to inhibit an enzyme called ATP citrate lyase. In doing so, HCA blocks the conversion of ingested carbohydrates to fat in the body. The blocked carbohydrates are diverted into energy production and do not

accumulate to be stored as fat. As a further benefit, fatty acids that are already in what scientists term the body's "fat pool" continue to be released, and since they are not fully replaced, a shrinkage in the body's overall level of fat results. In short, HCA yields two benefits prized by dieters: it increases the levels of satiety, thus making it easier to eat less, and it reduces the number of calories stored as fat.

Now comes the reason for writing this report. Sad to say, life is not always easy: the HCA in the *Garcinia* extract has to become bioavailable in order to accomplish the above. The state of availability is likely a major reason so many studies on the ingredient have resulted in divergent and contradictory outcomes. In order to be effective, the antiobesity agent must be handled properly—one must use the proper form of *Garcinia* (quality), the proper dose (quantity), and the proper timing and delivery mechanism for the dosing. Even many of the experts writing on *Garcinia* extracts have failed to look at these requirements when assessing the results of research investigations. As an example of one of the complexities found with *Garcinia* products, the active component of *Garcinia* extract is HCA, but HCA takes two forms: free HCA, which is active but tends to be unstable, and the more stable but inactive form of HCA—HCA lactone. If not handled properly, the active form has a tendency to revert to the more stable but inactive form. The passage of time can encourage inactivation of *Garcinia* extract via lactone formation, especially if the powder is placed in fluid. While manufacturers usually tell you how much HCA is present in their preparations, they seldom tell you how much is the inactive HCA lactone form.

Converting the acid HCA to an HCA "salt" by adding a stabilizing alkaline material lessens lactone formation. Therefore, in the standard preparations, the free acid becomes a calcium (Ca), potassium (K) and/or magnesium (Mg) salt. Ca is the usual salt form, but unfortunately when the extract is entirely Ca, it becomes poorly bioavailable and requires extremely high doses to make it even somewhat effective. More activity is achieved when a portion of the salts in the preparation are K and/or

Mg. As a rule of thumb, potassium makes an HCA salt that is more bioavailable than is magnesium, and magnesium makes an HCA salt that is more bioavailable than calcium. Therefore, it is very important when judging the efficacy of a *Garcinia* extract to know the characteristics of the salt makeup. The point is worth repeating; the poorer the bioavailability, the greater the dose needed for efficacy so that under dosing does not defeat the purpose of taking the supplement.

When considering dose, one must also distinguish whether the quantity of *Garcinia* extract or HCA is being discussed. From laboratory findings in a successful study, the effective dose of a Ca/K hydroxycitrate containing 60% *Garcinia* extract approximated 1.5 grams taken three times a day before meals. In terms of the pure HCA component of the salt, this works out to be a dose of about 0.9 grams taken three times a day before meals. (This amount can also be delivered as 2.25 grams of extract, supplying the equivalent of 1.35 grams pure HCA taken twice per day.) Not many of the current ads for *Garcinia* extract recommend this much. Accordingly, greater success should be attained with proper dosing. Most, albeit not all, successful clinical trials have used on the order of 4.5 grams of a salt yielding 60% HCA per day. With material of a higher purity, or more material based on potassium than calcium, the amount obviously might be reduced accordingly.

Another recommendation is to take the extract on an empty stomach. This is because in the presence of food, the hydroxycitrate salt can bind to some of the components in the meal and be inactivated. This is called the “food effect” and can seriously reduce the bioavailability of a number of supplements, not just HCA.

Suffice it to say, *Garcinia cambogia* can be an effective “fat loser” for most individuals if a good extract is used properly. Notice, we said “most individuals.” Humans are biologically different and respond differently. Even the best of drugs are not 100% effective. Then too, humans (being human) do not always comply with directions,

making any natural ingredient or drug less effective. To repeat, even a very effective agent can appear ineffective if used improperly. We have a saying: “If you don’t comply, don’t complain.”

To summarize how to achieve the best results with a *Garcinia cambogia* extract:

1. Chose a preparation that is at a minimum 50% HCA and is not composed wholly of Ca salts: make sure K and/or Mg is present. If the product has a low lactone content, that is even better.
2. Be sure to take an adequate dose. For a Ca/K preparation used successfully and reported in a peer-reviewed publication, the dose of extract was near 1.5 grams three times a day before meals. In this 60% HCA preparation, that approximates 0.9 grams of HCA prior to each meal.
3. Take the preparation on an empty stomach, i.e., 30 to 60 minutes before each meal.
4. Remember, “If you don’t comply, don’t complain.” Take the right dose at the right time.