

Comments on:

“Herbal Magic’s Claims regarding efficacy of Chromagic are supported by clinical evidence.

Here the first paper discusses the use of chromium and biotin in subjects with poorly controlled type 2 diabetes.ⁱ Indeed, with this specific subset of patients a 90 day treatment with chromium and biotin resulted in a small but significant improvement in their glycemic control and it also demonstrated a small but significant effect on reducing triglycerides. What the study did not show was these effects occurring in people taking chromium who are not suffering with poorly controlled type 2 diabetes and therefore the results are not applicable to a general population.

The second study purported to look at the effects of chromium on body composition. Amazingly,ⁱⁱ despite the study’s aim to measure body composition researchers didn’t bother to track dietary intake or physical activity before or during the study and there is no mention as to any potential differences between the study group and the controls as it does not appear as if there was an attempt to ensure the study and control groups were matched. This of course challenges any results, especially given that if the control group happened to be eating more or exercising less than the study group, one would certainly expect differences in body composition. Clearly the authors’ realized this as the next study provided was conducted by them with attempts to account for caloric intake and expenditure.ⁱⁱⁱ In the third study a total of 113 subjects completed the protocol. Unfortunately the methodology left much to be desired. Patients were given food diaries and were given a pamphlet on how to use them. Pedometers were provided as a measure of activity. Calories in and out were calculated and the researchers then took the numbers and divided them by 3,500 to come up with their “net change in body fat”. There are a few problems with that approach. Firstly tracking calories is complicated and a pamphlet without feedback is insufficient as a means to ensure people do it right – clearly if calorie intake isn’t well tracked, comparisons cannot be made. Secondly while giving some measure of activity, pedometers do not provide nearly as accurate measure of activity as accelerometers and hence the two groups’ fitness cannot be accurately compared. Thirdly, while the simple formula of 3,500 calories per pound is often used descriptively with patients, it can’t be used the way these researchers have done due to between person variations in metabolic efficiencies. The most important piece of information from this study then would be not what happened between the groups (as they’re not comparable) but rather what happened within the group taking the supplement. What happened there? Nothing. No statistically significant changes occurred in fat free mass in the study group leading me to conclude that this paper does not in fact support the notion that chromium does anything for healthy glucose metabolism or for helping the body to metabolize fat and proteins.

ⁱ (a) Albarracin et al. Chromium picolinate and biotin combinations improves glucose metabolism in treated uncontrolled overweight to obese patients with type 2 diabetes. *Diabetes/Metabolism Research and Reviews*, 2008)

ⁱⁱ (b) Kaats et al. Effects of Chromium Picolinate supplementation on body composition: a randomized double-masked, placebo controlled study. Published in *Current Therapeutic Research* 1996.

ⁱⁱⁱ (c) Kaats et al. A randomized double masked, placebo –controlled study of the effect of chromium picolinate supplementation on body composition: a replication and extension of previous study. *Current Therapeutic Research* 1998.