



By Stephen Daniells, 16-Nov-2010

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Ingredients touted for their fat modifying properties like conjugated linoleic acid (CLA) and pyruvate show 'some potential benefit', but the overall data is 'limited' says a new review.

Scientists from Thomas Jefferson University in Philadelphia and Creighton University in Nebraska performed a review of a range of dietary supplements for weight management and loss, and concluded that the best evidence is in support of CLA, chitosan, pyruvate, and *Irvingia gabonensis* via fat modifying mechanisms.

Writing in the *Journal of Obesity*, the reviewers note however that *"more data is necessary to draw any definitive conclusions on the use of dietary supplements for weight loss"*.

With about 65 percent of Americans classed as overweight or obese, the opportunities for scientifically-substantiated weight management food products are impressive. Indeed, the weight management market is already estimated by some to be worth nearly \$20bn.

The slimming ingredients market can be divided into six groups based on the mechanisms of action – boosting fat burning/thermogenesis, inhibiting protein breakdown, suppressing appetite/boosting satiety (feeling of fullness), blocking fat absorption, blocking carbohydrates, and regulating mood (linked to food consumption).

The reviewers, led by Creighton's Thomas Lenz identified relevant weight management trials using PubMed, Medline, International Pharmaceutical Abstracts, Cochrane Database, and Google Scholar. Their search identified a range of ingredients with potential, including CLA, *Garcinia cambogia*, chitosan, pyruvate, *Irvingia gabonensis*, and chia seed.

Further analysis revealed that the most compelling science was for CLA, chitosan, pyruvate, and *Irvingia gabonensis*, said the researchers, but "the data on the use of these products is limited", they added.

Continued research is needed in this area to aid health care providers as well as the public in general," wrote Lenz and his co-workers. "Health care providers should be aware of the weight loss products available to their patients and assist patients in determining the risks and benefits of supplement use for weight loss," they concluded.

Expanding waistlines, expanding market

At the recent SupplySide West in Las Vegas, Tom Vierhile from Datamonitor explained that Market Data puts the US market at \$68.7 billion, a figure which includes services such as Weight Watchers and Jenny Craig. The US market is currently growing at an annual rate of 6 percent, he added.

Vierhile told attendees that the big growth area for supplements regarding claims is for calorie or fat burning. In 2007, calorie/fat burning was experiencing 1 percent growth, while in 2010 this had increased to 3 percent, he said.

However, such growth is not without its questioning. *"According to Datamonitor research, this kind of claim has the highest degree of skepticism amongst consumers,"* he said.

CLA facts

CLA is a fatty acid naturally present in ruminant meat and dairy products. Due to changes in the Western diet, average intake of CLA has fallen; if the fat is removed from a dairy product to make a low fat version that will be acceptable to consumers, CLA is removed along with it.

The CLA market is expanding, according to a 2007 Frost & Sullivan report, which said the global market is forecast to reach revenues of US\$109.9 million in 2013. Key players in the market include Lipid Nutrition with its Clarinol ingredient and BASF Corporation with its Tonalin ingredient.

Source: *Journal of Obesity*

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"An Evidence-Based Review of Fat Modifying Supplemental Weight Loss Products"

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The full article can be accessed here.

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