

# **OTC** Weight-Loss Products:

## Do They Deliver?

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The public has been deluged for years by claims of fantastic results with weight-loss aids. This is one of the more lucrative areas for Internet operations and tabloid journalism, where the cycle of falling prey to the "next best thing" is rampant. Patience is also at a premium. Although it may have taken years to gain weight, few seem to take the slow, methodical steps required to lose it.

## Nasal decongestants

Some over-the-counter (OTC) agents garnering attention have been phenylpropanolamine (PPA) and ephedra. Both are nasal decongestants and distant cousins to the amphetamine family. Neither was ever officially indicated for weight loss in Canada and that remains the case today. PPA was also recently removed from the market (as a decongestant) due to concerns over hemorrhagic stroke, while ephedra can be found in some non-pharmacy outlets. Ephedra's safety has also been under scrutiny and this culminated in the U.S. Food and Drug Administration

## Mary's case

Mary, 42, is a regular patient who has hypertension and often complains of joint pain. She is about 40 lbs overweight. She has tried a multitude of tabloid diets over the past 15 years, the most recent being a low-carbohydrate type.



She asks if there is anything she can buy in a pharmacy that might help shed some pounds.

For the answer to Mary's question, go to page 87.

banning its sale as of late December 2003. Trials showed that people using ephedra lost weight at a rate of 0.6 kg per month more than the placebo group. Average weight loss at four months has been 11%, with only high doses (defined as 100 mg/day to 150 mg/day) producing statistically significant results. To put these dosages in perspective, Health Canada allows



#### Table 1

### Popular agents found in health food stores

#### **Agent**

## Hydroxycitric acid (Garcinia cambogia)

Chitosan

Apple cider vinegar

#### Mechanism and efficacy

It is thought to inhibit lipogenesis. It has reduced energy intake in patients, but a randomized, controlled trial failed to show significant weight loss.

It is a water-soluble extract from the shells of crustaceans that is chemically similar to cellulose. It is purported to bind to lipids in the gut (chitosan is positively-charged while fats are negative), thereby decreasing their absorption. While weight loss has been reported, actual excretion of fat from the body has been questioned.

Of dubious value.

32 mg per day as a decongestant.\* When caf-

feine is added (also an unapproved use in

mal intake) for a week can potentially shed one pound. Package material also recommends exercise and caloric

With meal replacements, such as Slim Fast®, a person running a daily deficit of 500 kcal for a week can potentially shed one pound.

Canada), the rate of weight loss jumps to 1 kg per month, and again, an average loss of 11% has been attained at four months.

## Meal replacements

Meal replacements (e.g., Slim Fast<sup>®</sup>) are milk-shake-like liquids that are designed to have less

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restrictions. The question with the meal replacement approach may be suboptimal nutritional balance and its sustainability over time. However, long-term results have been seen in structured programs<sup>2,3</sup> and

calories than the

meal(s) the user is

asked to replace. Each 325 mL can

has 240 kcal, con-

tains a mix of pro-

teins/carbohy-

drates/fats, and an

array of vitamins

and minerals. With

this system, a per-

son running a daily

deficit of 500 kcal

(compared to nor-

assistance from a health-care professional has helped.  $^{4,5}$ 

#### Benzocaine

Dexatrim® and Appedrine® are tablets containing seven vitamins and minerals, as well as benzocaine to numb the tongue and/or stomach. As the main active ingredient, benzocaine (even at much higher doses) has minimal impact on weight loss.<sup>6</sup>

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## A followup on Mary

To answer Mary's question, while commercial meal replacements might hold some promise, the local pharmacy can offer very little by way of effective non-prescription options.

Dozens of other agents are found in health food stores. Table 1 lists three of the more popular ones.  $\mathbf{D}_{\mathbf{k}}$ 

\*At the time of writing, the Health Canada Web site had not responded to this American action.

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