

Orlistat, Really Effective for Weight Loss?

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Abstract

Orlistat is an over-the-counter drug used for weight loss. It carries away 30% of dietary fat, which accounts for approximately 12% of total calories from a conventional diet, and means the loss of 1 body fat kilogram in about 5 weeks, while a well-designed diet together with moderate exercise can result on 2 to 4 kilograms lose per month. The side effects of orlistat are very uncomfortable. It is concluded that orlistat is less advantageous for weight loss than healthy lifestyle.

1. INTRODUCTION

Orlistat is a drug used for weight control and sold without a prescription. Anyone can purchase it at a pharmacy without any additional supervision. Orlistat blocks the absorption of approximately 30% of the fats that are ingested (25 to 33%) (1).

2. DISCUSSION

In 1715 calories and 73 grams of fat diet (Table 1) (2) orlistat prevents approximately 21.6 (73 x 30%= 21.3) grams of fat from being absorbed, equivalent to 197.1 calories (21.6 x 9 = 197.1), 11.4% of the total caloric value, whereas, exercise alone accounts for 20% of the day's caloric expenditure. This means that physical activity has much more impact on weight loss than using orlistat (3).

Losing one kilogram of body fat requires an accumulated deficit of approximately 7600 calories (1 kilogram of fat contains 9000 calories, but adipose tissue has other elements besides fat). If the diet is 1715 calories and orlistat carries 197.1 calories (21.9 x 9 = 197.1) it takes 38.5 days to lose one kilogram of fat (7600/197.1= 38.5). A well-designed diet with a daily deficit of 500 calories causes the loss of 1 kilogram of fat in 15 days (7600 / 500 = 15.2), much more advantageous than orlistat. And if the patient considers that she/he can eat something extra trusting that orlistat will cause the loss of much more weight, may eat some extra preparation, such as a burrito with ham and grilled cheese with 290 calories and 18 grams of fat (Table 2), the caloric deficit could even balance out and there would never be a weight loss.

Table 1. Caloric and fat content in a sample diet

Food	Calories (kcal)	Fat(grams)	Fat (grams) carrying orlistat
Breakfast			
Eggwithgreenbeans:			
2 wholeeggs	150	10	3
1/2 cup cookedgreenbeans	25	0	0
2 corn tortillas	140	0	0
1/3 avocado	45	5	1.5
Banana smoothie:			
1 glassofwholemilk	150	8	2.4
1 banana	60	0	0
Meal			
Roastbeefwith rice			
1 cup ofprepared rice	160	3	0.9
100 gramsof roastbeef	150	10	3
1/2 cup cookedbeans	120	1	0.3
1 cup cooked broccoli	50	0	0

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2 tablespoons olive oil	90	10	3
<i>Dessert:</i>			
1 muffin	230	10	3
<i>Dinner</i>			
<i>Chayotes withcheese:</i>			
1/2 cup cooked chayotes	25	0	0
40 grams of manchego cheese	100	8	2.4
<i>Yogurt withoatmeal:</i>			
1/2 cup yogurt	150	8	2.4
3 tablespoons oatmeal	70	0	0
Total	1715	73	21.9

Table 2. Caloric and fat intake of a ham and cheese burrito

Food	Calories (kcal)	Fat(grams)	Fat (grams) carrying orlistat
1 burrito tortilla	115	5	1.5
2 ham slices	75	5	1.5
40 grams gouda cheese	100	8	2.4
Total	290	18	5.4

In addition, orlistat does not discriminate by type of fat, i.e., it absorbs saturated fats, which are the most harmful, but it also absorbs monounsaturated and polyunsaturated fats, which are those that the body uses to fight diseases and maintain cardiovascular health. In the diet (table 1) there is 21% of saturated fats, approximately, that is to say that of the 21.9 grams that orlistat carries out 17.3 grams are high quality fats. In addition, vitamin D is included as part of these fats, which is very difficult to cover with the diet, and even more so if the drug carries a part of it.

On the other hand, general indications are to take one capsule 3 times a day, one with each meal, at any time from the beginning of the meal and up to 1 hour later, because that is the estimated time it takes for digestion. If the subject forgets a dose, it is advisable to skip it and continue in a normal way the next dose, because if she/he takes it when she/he remembers and the digestion is already finished, there will be no more fats in the intestine on which orlistat could act and the capsule will only be "wasted". The same happens if the food ingested does not contain any fat: it would be just wasting the capsule, because orlistat does not act over proteins or carbohydrates that are present in the diet.

Since orlistat acts on the intestine, the side effects are on this organ (4). The most common is the urge to evacuate, because the unabsorbed fat is lost through this route causing an increase in the amount of fecal matter. This large amount of fecal matter is interpreted in the sphincter as diarrhea, then the urge to defecate appears, accompanied by cramps and inflammation that

disappear together with the evacuation. Just like a diarrhea, this urge has no timetable, it can appear at any time of the day, just like using a laxative for which the manufacturer offers 8 hours before observing the action, but in fact it can be between 6 and 12 hours. And if the subject is at work, in a meeting, attending a client, or in the car, the experience can be really traumatic.

These symptoms are as uncomfortable as they are transient, in fact they only appear during the first two weeks of use. Thereafter, these effects are still experienced, but they are much more tolerable. Even so, the discomfort outweighs its effectiveness on weight loss.

A well-designed diet with regular and moderate exercise can result in the loss of 2 to 4 kilograms per month in a healthier, more comfortable and more economical way than using orlistat.

3. CONCLUSION

Using orlistat can mean the loss of 1 kilo of fat in approximately one month, while a 500 calories deficit may result in the loss of the same kilogram in 15 days, and if routine physical activity is added the loss can be greater, without experiencing the side effects of orlistat. Healthy lifestyle is most advantageous for weight loss than using orlistat.

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