

Name:..... Date:.....

Chemistry and diet

Diets hardly ever work - within weeks of stopping a diet, weight (body mass) piles on again. Surely there must be an easier way to lose weight? Scientists think they have an answer: the weight-loss pill. This is a medicine which can be taken to stop us putting on weight, but at the same time means we can eat what we like – or can we?

The weight-loss pill

Most weight-loss pills work on the brain. They send signals to lower the desire to eat food. This can be OK, but imagine not being able to eat Christmas dinner or a special meal cooked for you because you are taking a pill which stops you eating!

The latest weight-loss pill, called Xenical, stays in the digestive system. It stops up to 30% of the fat in food from being taken into the body. Instead, the fat is washed out from the colon, ending up in waste matter. The drug was found in a soil bacterium on the Spanish island called Majorca. Xenical stops enzymes called lipases in the digestive system from breaking down fat molecules into smaller pieces. It is a lipase inhibitor.

Xenical is a new way for treating obesity because it does not lower appetite. To test how good it might be, about 900 patients in the USA took part in a two year clinical trial. In the first year, some took Xenical while others took 'dummy' pills. Everyone ate less fat and did an exercise programme. On average, patients taking Xenical lost 9 kg in weight in the first year, while those on the dummy pills lost about 6 kg. One third of patients taking Xenical lost about 10% of their weight (18–22 kg) in one year. In the second year, the diet was changed to keep weight the same, not to lose it. Xenical patients gained 3–4 kg on average, while those on dummy pills gained about 6 kg.

Scientists say that Xenical can help control the body weight of obese people.

Questions

1. How do most weight-loss pills work?

.....
.....

2. What is different about Xenical?

.....
.....

3. Does Xenical 'work' any better than changing diet and taking exercise?

.....
.....

4. Is it sensible to take Xenical without changing lifestyle? Explain your answer

.....
.....

continued on next page



Chemistry and diet

continued from previous page

5. Is it sensible to let any overweight person take Xenical? Explain your answer.

.....

.....

.....

