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## EPAR summary for the public

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# Zavesca

## miglustat

This document is a summary of the European Public Assessment Report (EPAR) for Zavesca. It explains how the Committee for Medicinal Products for Human Use (CHMP) assessed the medicine to reach its opinion in favour of granting a marketing authorisation and its recommendations on the conditions of use for Zavesca.

### What is Zavesca?

Zavesca is a medicine that contains the active substance miglustat. It is available as capsules (100 mg).

### What is Zavesca used for?

Zavesca is used to treat two inherited diseases that affect the way the body handles fats. Both diseases cause a build-up of fatty substances called glycosphingolipids in the body. Zavesca is used to treat the following patients:

- adults (aged 18 years and above) with mild to moderate type 1 Gaucher disease. Patients with this disease lack an enzyme called glucocerebrosidase, which results in a glycosphingolipid called glucosylceramide building up in different parts of the body, such as the spleen, liver and bones. Zavesca is used in patients who cannot receive the standard treatment of enzyme replacement therapy (ERT);
- patients of all ages with Niemann-Pick type C disease, a potentially fatal disease in which glycosphingolipids build up within cells in the brain and elsewhere in the body. Zavesca is used to treat the neurological symptoms of the disease (symptoms affecting the brain and nerves). These include loss of co-ordination, problems with 'saccadic' (rapid) eye movements that can lead to impaired vision, delayed development, difficulty swallowing, decreased muscle tone, fits and learning difficulties.



Because the number of patients with these diseases is low, they are considered 'rare', and Zavesca was designated an 'orphan medicine' (a medicine used in rare diseases) on 18 October 2000 for type 1 Gaucher disease and on 16 February 2006 for Niemann-Pick type C disease.

The medicine can only be obtained with a prescription.

## **How is Zavesca used?**

Treatment with Zavesca should be started and monitored by doctors who are experienced in the management of Gaucher or Niemann-Pick type C disease.

The recommended starting dose for type 1 Gaucher disease is one capsule three times a day. For Niemann-Pick type C disease, it is two capsules three times a day for patients aged 12 years and over; in younger patients, the dose depends on their weight and height. Zavesca is intended for long-term use.

A lower dose should be used in patients with reduced kidney function. The dose should also be reduced temporarily in patients who develop diarrhoea. For further information, see the summary of product characteristics (also part of the EPAR).

## **How does Zavesca work?**

The active substance in Zavesca, miglustat, prevents an enzyme called glucosylceramide synthase from working. This enzyme is involved in the first step of the production of glycosphingolipids. By preventing the enzyme from working, miglustat can reduce the production of glycosphingolipids in cells. This is expected to slow down or prevent the development of the symptoms of type 1 Gaucher disease and to reduce the symptoms of Niemann-Pick type C disease.

## **How has Zavesca been studied?**

For type 1 Gaucher disease, Zavesca was investigated in one main study involving 28 adults with mild to moderate disease who were unable or unwilling to receive ERT. The main part of the study lasted for a year, but 13 patients carried on receiving the medicine for a further two years. The study looked at the effect of Zavesca on the size of the liver and spleen, and at blood counts, such as the levels of haemoglobin (a protein found in red blood cells that carries oxygen around the body) and platelets (components that help the blood to clot).

For Niemann-Pick type C disease, Zavesca was studied in one main study involving 31 patients, 12 of whom were less than 12 years old. The study compared the effects of adding Zavesca to standard care with the effects of standard care alone. The main measure of effectiveness was the change in the speed at which the patients made saccadic horizontal eye movements after a year, but the study also looked at other neurological symptoms such as the patients' ability to swallow and their intellectual function. Some patients were treated for up to five and a half years. The company also presented the results of a survey of 66 patients treated with Zavesca.

## **What benefit has Zavesca shown during the studies?**

In the study of type 1 Gaucher disease, there were moderate reductions in the size of the liver (12% reduction) and the spleen (19% reduction) after a year. There were also small improvements in blood counts: on average, the levels of haemoglobin increased by 0.26 g per decilitre and platelet counts increased by 8.29 million per millilitre. The benefits of Zavesca were maintained over three years of continuous treatment.

In the study of Niemann-Pick type C disease, the improvement in eye movements was similar in patients treated with and without Zavesca. However, there were signs of improvement in swallowing ability and intellectual function in the patients treated with Zavesca. The survey showed that Zavesca led to a stabilisation or a decrease in the rate at which symptoms got worse in about three-quarters of the patients.

### **What is the risk associated with Zavesca?**

The most common side effects with Zavesca (seen in more than 1 patient in 10) are weight loss, decreased appetite, tremor (shaking), diarrhoea, flatulence (gas) and abdominal pain (stomach ache). For the full list of all side effects reported with Zavesca, see the package leaflet.

Zavesca must not be used in people who are hypersensitive (allergic) to miglustat or any of the other ingredients.

### **Why has Zavesca been approved?**

The CHMP decided that Zavesca's benefits are greater than its risks and recommended that it be given marketing authorisation.

Zavesca was originally authorised under 'exceptional circumstances' because, as the diseases are rare, limited information was available at the time of approval. As the company had supplied the additional information requested, the exceptional circumstances ended on 23 August 2012.

### **Other information about Zavesca:**

The European Commission granted a marketing authorisation valid throughout the European Union for Zavesca on 20 November 2002.

The full EPAR for Zavesca can be found on the Agency's website: [ema.europa.eu/Find medicine/Human medicines/European public assessment reports](http://ema.europa.eu/Find%20medicine/Human%20medicines/European%20public%20assessment%20reports). For more information about treatment with Zavesca, read the package leaflet (also part of the EPAR) or contact your doctor or pharmacist.

The summaries of the opinions of the Committee for Orphan Medicinal Products for Zavesca on the Agency's website [ema.europa.eu/Find medicine/Human medicines/Rare disease designations](http://ema.europa.eu/Find%20medicine/Human%20medicines/Rare%20disease%20designations):

- [Gaucher disease](#);
- [Niemann-Pick type C disease](#).

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