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Daxas *(roflumilast)*

An overview of Daxas and why it is authorised in the EU

What is Daxas and what is it used for?

Daxas is a medicine used to treat severe chronic obstructive pulmonary disease (COPD) in adults who have chronic bronchitis (long-term inflammation of the airways), and whose COPD flares up frequently. COPD is a long-term disease in which the airways and air sacs inside the lungs become damaged or blocked, leading to difficulty breathing air in and out of the lungs.

Daxas is not used on its own but as an 'add-on' to treatment with bronchodilators (medicines that widen the airways in the lungs).

Daxas contains the active substance roflumilast.

How is Daxas used?

Daxas is available as tablets (250 and 500 micrograms) and can only be obtained with a prescription.

The recommended dose of Daxas for treatment is one 500-microgram tablet once a day, but treatment is started with one 250-microgram tablet daily to reduce side effects that might make patients stop taking the medicine. The tablets should be taken at the same time each day. After taking 250 micrograms daily for 4 weeks, the dose is increased to 500 micrograms daily. Patients may need to take Daxas 500 micrograms for several weeks before it starts to have an effect.

For more information about using Daxas, see the package leaflet or contact your doctor or pharmacist.

How does Daxas work?

The active substance in Daxas, roflumilast, belongs to a group of medicines called 'phosphodiesterase type 4 (PDE4) inhibitors'. It blocks the action of the PDE4 enzyme, which is involved in the inflammation process that leads to COPD. By blocking the action of PDE4, roflumilast reduces the inflammation in the lungs, helping to reduce the patient's symptoms or to prevent them from getting worse.

What benefit of Daxas have been shown in studies?

Daxas 500 micrograms was shown to be more effective than placebo (a dummy treatment) at treating COPD in two main studies. These involved over 3,000 adults with severe COPD who had had at least

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one flare-up of their disease in the past year. The patients could continue to receive treatment with a bronchodilator during the study. The main measure of effectiveness was the improvement in forced expiratory volumes (FEV_1) and the reduction in the number of moderate or severe flare-ups of their COPD over a year of treatment. FEV_1 is the most air a person can breathe out in one second.

At the beginning of the studies, both groups of patients had an FEV_1 of around 1 litre (1,000 ml). After a year, the patients who took Daxas had an average increase of 40 ml while those given placebo had an average decrease of 9 ml. In addition, the patients who took Daxas had an average of 1.1 moderate or severe flare-ups of their disease, compared with 1.4 flare-ups in the patients who took placebo.

Another 12-week study involving 1,323 patients examined the effect of starting treatment with Daxas 250 micrograms daily for 4 weeks before increasing the dose to 500 micrograms daily, compared with starting at the higher dose. Around 18% (81 of 441 patients) of those started at 250 micrograms daily dropped out of the study, compared with 25% (109 of 443) of those starting with 500 micrograms daily. Patients started on the lower dose had fewer side effects. The benefits in improving FEV_1 were similar in both groups at the end of the study; however, patients who could not take 500 micrograms daily and were then just given 250 micrograms daily did not show an improvement in lung function.

What are the risks associated with Daxas?

The most common side effects with Daxas (seen in between 1 and 10 patients in 100) are decreased weight, decreased appetite, insomnia (difficulty sleeping), headache, diarrhoea, nausea (feeling sick) and abdominal pain (stomach ache). Because patients taking Daxas may lose weight, they are advised to weigh themselves on a regular basis. The doctor may stop treatment with Daxas if the patient loses too much weight. For the full list of side effects of Daxas, see the package leaflet.

Daxas must not be used in patients who have moderate or severe problems with their liver. For the full list of restrictions, see the package leaflet.

Why is Daxas authorised in the EU?

The European Medicines Agency noted that there was a need for new COPD treatments and that the main studies showed a modest benefit of Daxas 500 micrograms in patients with severe COPD. This benefit was seen on top of the effects of the treatments that the patients were already receiving. Although a dose of 250 micrograms daily does not improve lung function it was useful in preventing patients from dropping out because of side effects when starting treatment. After considering all of the available data on the effects of the medicine, the Agency decided that Daxas's benefits are greater than its risks and it can be authorised for use in the EU.

What measures are being taken to ensure the safe and effective use of Daxas?

The company that makes Daxas will ensure that healthcare professionals who will prescribe the medicine in all Member States of the European Union (EU) are provided with educational materials containing information on the medicine's side effects and how it should be used. The company will also provide cards for patients, telling them what information about their symptoms and past illnesses they need to give their doctor to help the doctor determine whether Daxas is appropriate for them. The card will include an area where patients can record their weight.

The company is also carrying out an observational study on the long-term safety of the medicine.

Recommendations and precautions to be followed by healthcare professionals and patients for the safe and effective use of Daxas have also been included in the summary of product characteristics and the package leaflet.

As for all medicines, data on the use of Daxas are continuously monitored. Side effects reported with Daxas are carefully evaluated and any necessary action taken to protect patients.

Other information about Daxas:

Daxas received a marketing authorisation valid throughout the EU on 5 July 2010.

Further information on Daxas can be found on the Agency's website: ema.europa/Find medicine/Human medicine/European public assessment reports.

This overview was last updated in 03-2018.