



EUROPEAN MEDICINES AGENCY  
SCIENCE MEDICINES HEALTH

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## Entresto (*sacubitril / valsartan*)

### What is Entresto and what is it used for?

Entresto is a heart medicine used in adults with chronic (long-term) heart failure who have symptoms of the disease and reduced ejection fraction (a measure of how well the heart pumps blood). The medicine is also used in adolescents and children from 1 year of age with chronic heart failure who have symptoms of the disease and left ventricular systolic dysfunction (a problem affecting the left side of the heart).

Heart failure is the inability of the heart to pump enough blood around the body.

Entresto contains the active substances sacubitril and valsartan.

### How is Entresto used?

Entresto can only be obtained with a prescription. The medicine is available as tablets and granules to be taken by mouth twice a day.

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

### How does Entresto work?

The two active substances in Entresto, sacubitril and valsartan, work in different ways. Sacubitril blocks the breakdown of natriuretic peptides produced in the body. Natriuretic peptides cause sodium and water to pass into the urine thereby reducing the strain on the heart. They also reduce blood pressure and protect the heart from developing fibrosis (scar tissue) that occurs in heart failure.

Valsartan is an 'angiotensin-II-receptor antagonist', which means that it blocks the action of a hormone called angiotensin II. The effects of angiotensin II can be harmful in patients with heart failure. By blocking the receptors (targets) to which angiotensin II normally attaches, valsartan stops the hormone's harmful effects on the heart and also reduces blood pressure by allowing blood vessels to widen.



## What benefits of Entresto have been shown in studies?

Entresto has been shown to be effective at treating heart failure in adults in one main study. In the study, Entresto was compared to enalapril, another medicine used for heart failure. Patients in the study had long-term heart failure with symptoms of the disease and reduced ejection fraction (the proportion of blood leaving the heart). In the group treated with Entresto, 21.8% (914 of 4,187) of patients either died as a result of heart and circulation problems or were admitted to hospital with heart failure compared to 26.5% (1,117 of 4,212) of patients treated with enalapril. In general, patients were monitored for about 27 months, during which they took the medicine for about 24 months on average. The study was stopped early because there was compelling evidence that Entresto was more effective than enalapril.

A study involving children and adolescents showed that the way Entresto behaves in the body in people below 18 years old is similar to that seen in adults. In addition, Entresto led to similar reductions across age groups in the blood levels of NT-proBNP. Patients with heart failure have raised levels of NT-proBNP, substances made by the heart. A reduced level of NT-proBNP is associated with a better outcome for patients.

In addition, the study compared Entresto with enalapril in 377 patients aged 1 month to below 18 years with heart failure due to systemic left ventricle systolic dysfunction. The main measure of effectiveness was the likelihood of a better outcome after one year of treatment compared with that in the other treatment group (based on the ranking of various events such as death, urgent heart transplant or worsening of symptoms). The results did not show that Entresto was more effective than enalapril in terms of this measure. However, in both the Entresto and enalapril groups, there were relevant improvements in symptoms and quality of life measures.

## What are the risks associated with Entresto?

For the full list of side effects and restrictions with Entresto, see the package leaflet.

The most common side effects with Entresto in adults (which may affect more than 1 in 10 people) include hyperkalaemia (high blood potassium levels), hypotension (low blood pressure) and renal impairment (kidneys working less well). A potentially severe side effect, angioedema (rapid swelling of deeper skin tissues as well as the tissues around the throat, causing breathing difficulty) can occur uncommonly (in up to 1 in 100 people).

Side effects in children and adolescents are similar to those seen in adults.

Entresto must not be taken with medicines known as ACE inhibitors (to treat heart failure and high blood pressure) or with medicines containing aliskiren (to treat high blood pressure), in patients who have diabetes or reduced kidney function. It must not be taken by patients who have suffered angioedema, those who have severe liver disease or by women who are pregnant.

## Why is Entresto approved?

The European Medicines Agency decided that Entresto's benefits are greater than its risks and it can be authorised for use in the EU. The main study found that in adults Entresto reduced deaths from heart and circulation problems or hospital admissions for heart failure. An additional study has shown that Entresto is expected to provide clinically meaningful benefits to children and adolescents with symptomatic heart failure due to systemic left ventricular dysfunction.

Entresto's serious side effects in the main study were similar to those of enalapril, another medicine used for heart failure. Valsartan, one of the active substances in the medicine, is well established for the treatment of high blood pressure and heart failure; its side effects are well known.

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

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

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

## Other information about Entresto

Entresto was granted a marketing authorisation valid throughout the European Union on 19 November 2015.

Further information on Entresto can be found on the Agency's website:

[ema.europa.eu/medicines/human/EPAR/entresto](https://ema.europa.eu/medicines/human/EPAR/entresto)

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