

Summary of the results of the clinical trial for laypersons

SUSTAIN 11: A research study to compare semaglutide to insulin aspart, when taken together with metformin and insulin glargine, in people with type 2 diabetes

About this summary

This summary gives the public information about a research study called a 'clinical trial'. It is also written for people who took part in the study.

The full results of the research study are described in a long report – for researchers, health professionals and for people who approve medicines. This document is a summary of that report.

These results are for this study only. Other studies may show different results.

Thank you to the people who took part in the study and staff who made this study possible.

1 General information about the study

When and where did the study take place?

The study took place from October 2018 to February 2021.

The study was carried out in 21 countries:

- European Union (EU): Bulgaria, Croatia, Czech Republic, Estonia, Germany, Greece, Hungary, Latvia, Lithuania, Poland, Portugal, Romania, Slovakia, Slovenia, Spain
- Outside the EU: Bosnia and Herzegovina, India, North Macedonia, Serbia, South Africa, Turkey

Why is this study important?

People with type 2 diabetes have too high sugar in their blood. This can cause many health

problems. In healthy people, the body makes enough insulin to control blood sugar. People with type 2 diabetes can take medicine to lower blood sugar.

Metformin is one such medicine. People with type 2 diabetes often start to take metformin to treat type 2 diabetes.

People with type 2 diabetes can also take insulin as a medicine. There are 2 main types of insulin:

- Basal insulins: work slowly and for a long time in the body.
- Bolus insulins: work fast and for a short time in the body

Insulin aspart is a type of bolus insulin.

Semaglutide is another medicine used to treat type 2 diabetes. This medicine is similar to a hormone in the body called GLP-1 (glucagon-like peptide-1). It helps the body release more insulin.

Semaglutide helps your body reduce your blood sugar only when blood sugar is too high. But semaglutide together with an insulin might increase the risk of getting low blood sugar. Side effects of semaglutide is less appetite and weight loss.

People in this study took either semaglutide or insulin aspart.

All people in this study also took metformin and insulin glargine (basal insulin).

What did researchers want to find out?

The researchers wanted to know more about semaglutide for treatment of people with type 2 diabetes.

They wanted to know how semaglutide taken once weekly works on blood sugar compared to insulin aspart taken 3 times daily after 1 year of treatment.

The researchers also looked at how safe the medicines were including low blood sugar and the effect on body weight.

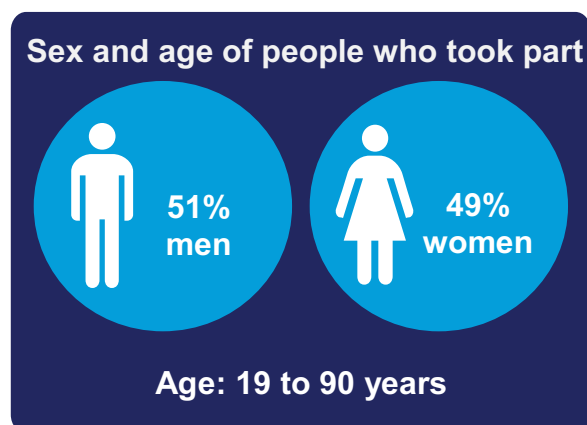
They studied this in people with type 2 diabetes. The people in the study had too high blood sugar even though they took metformin and basal insulin (or other medicine to treat type 2 diabetes).

Type of study

This was a 'phase 3b' study. This means that the doctors tested the medicines in a large group of people with type 2 diabetes.

2 Who took part in this study?

1748 women and men who had had type 2 diabetes for a long time took part in this study. Of these, 1738 people took the study medicines (semaglutide or insulin aspart).



The study included:

- 1022 people from the European Union
- 726 people from Bosnia and Herzegovina, India, North Macedonia, Serbia, South Africa, Turkey

To be in the study, the women and men had to:

- have type 2 diabetes
- be 18 years of age or older
- be taking metformin alone or together with one other medicine for type 2 diabetes (taken by mouth)
- be treated with basal insulin once daily or twice daily
- have an HbA_{1c} between 7.5% and 10%. HbA_{1c} is a measure of the blood sugar over the last 3 months

People could not take part in the study if they:

- had or had previously had an inflamed pancreas
- had heart problems
- had poorly treated eye disease due to diabetes

3 Which medicines were studied?

Two medicines were compared in the study:

Semaglutide

- 1 weekly injection of 1.0 mg
- To minimize side effects, the dose of semaglutide was gradually increased in the beginning of the study
- The doctors could lower the dose during the study if needed

Insulin aspart

- 3 daily injections
- The doctors calculated the dose that each person in the study should take

At study start, people were split in the following 2 groups by chance (randomly):

- Semaglutide (874 people)
- Insulin aspart (874 people)

Both medicines were injected under the skin of the thigh, abdomen, or upper arm.

All people in the study took metformin (pill) and insulin glargine (injection) once a day. People had to start taking these medications 3 months

before the study with semaglutide and insulin aspart started. This was to try to get control of their blood sugar. In total, 2274 started taking metformin and insulin glargine. After 3 months, 1738 people started treatment with study medicine: semaglutide or insulin aspart.

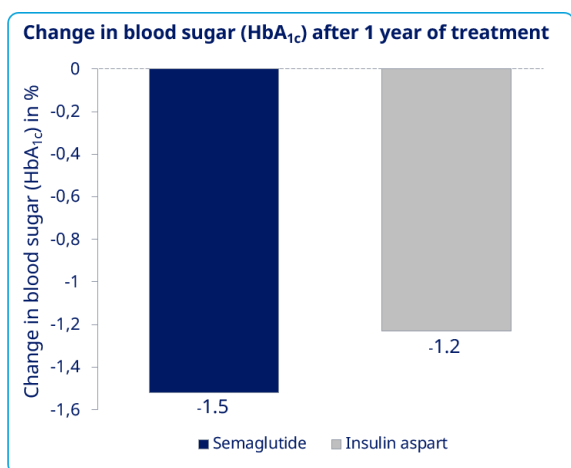
People in the study should take the study medicines for 1 year.

This was an open-label study. This means that the researchers and the people in the study knew who was getting which treatment.

4 What were the overall results of the study?

In this study, researchers found that after 1 year of taking the medicine, semaglutide lowered blood sugar more than insulin aspart in people already taking metformin and basal insulin.

At the start of the study, people had blood sugar (HbA_{1c}) between 7.5% and 10%. At the end of the study, this had changed the most (was lower) for people taking semaglutide, see figure:



The blue bar is the change in blood sugar in the group who took semaglutide (-1.5% HbA_{1c}). The grey bar is the change in blood sugar in the group who took insulin aspart (-1.2% HbA_{1c}).

Few people had episodes of severe low blood sugar where they needed help from another person to get well again with both semaglutide and insulin aspart. The total number of low blood sugar episodes was lower for people who took semaglutide compared to people who took insulin aspart.

People treated with semaglutide typically lost weight while people treated with insulin aspart typically gained weight.

More details on this study can be found on the websites in Section 10.

5 What were the side effects?

What are side effects?

Side effects are unwanted medical 'events' which the doctor believes may be caused by the medicine in the study.

Not all people in this study had side effects.

A side effect is serious if it:

- leads to death,
- is life-threatening,
- puts someone in the hospital or keeps them in the hospital for a long time,
- causes a birth defect,
- causes a disability that lasts a long time or
- needs medical or surgical treatment to prevent any of the above, as judged by the doctor.

What were the serious side effects?

7 of 1738 people (0.4%) had a total of 8 serious side effects:

- 1 of 874 people (0.1%) on semaglutide
- 6 of 864 people (0.7%) on insulin aspart

The 1 serious side effect in the semaglutide group was low blood sugar.

The most common serious side effects in the insulin aspart group were low blood sugar and side effects related to low blood sugar.

No one died of side effects during the study.

What were the most common side effects?

305 of 1738 people (17.5%) who took medicine had side effects in the study:

- Semaglutide: 262 of 874 people (30%)
- Insulin aspart: 43 of 864 people (5%)

Stomach and gut problems were the most common side effects. More people in the semaglutide group had these side effects compared to the people in the insulin aspart group. This has also been seen in other studies with semaglutide. Most of these side effects were mild or moderate. The side effects were:

Feeling sick (nausea):

- Semaglutide: 118 of 874 people (13.5%)
- Insulin aspart: 1 of 864 people (0.1%)

Loose stools (diarrhoea):

- Semaglutide: 48 of 874 people (5.5%)
- Insulin aspart: 1 of 864 people (0.1%)

Being sick (vomiting):

- Semaglutide: 43 of 874 people (4.9%)
- Insulin aspart: no people had this side effect

6 How has the study helped people and researchers?

This study is just one of many studies. The studies are done to find out how best to use semaglutide to treat people with type 2 diabetes.

Researchers found that semaglutide lowers blood sugar more than insulin aspart in people already taking metformin and basal insulin.

They also found that less people had episodes of low blood sugar with semaglutide than with insulin aspart, and that people typically lost

weight with semaglutide and typically gained weight with insulin aspart.

Findings from this study will be used to further study the safety and efficacy of semaglutide.

These results are for this study only. Other studies may show different results.

7 Are there plans for further studies?

Studies with semaglutide are still going on and more studies are planned.

Details on these studies will be posted on the websites listed in Section 10.

8 Study name

Study name: Effect of semaglutide once-weekly versus insulin aspart three times daily, both as add on to metformin and optimised insulin glargine (U100) in subjects with type 2 diabetes

A 52-week, multi-centre, multinational, open-label, active-controlled, two armed, parallel-group, randomised trial in subjects with type 2 diabetes

Phase of clinical development: Phase 3b

EudraCT number: 2017-003219-20

UTN number: U1111-1200-0164

National Clinical Trial number: NCT03689374

9 Who sponsored the study?

Research sponsor: Novo Nordisk A/S

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10 Where can I find more information?

You can find more information about the study or the medicine at these websites:

- Summary of results and study report
www.novonordisk-trials.com, NN9535-4386
- European Medicines Agency
www.ema.europa.eu, [semaglutide \(Ozempic\)](#)
- EUs clinical trials register
www.clinicaltrialsregister.eu,
(for this study: [2017-003219-20](#))
- US government clinical trials website
www.clinicaltrials.gov,
(for this study: [NCT03689374](#))
- Drug Trials Snapshots
www.fda.gov/Drugs/InformationOnDrugs/ucm412998.htm ([Ozempic](#))

For general information about clinical studies please go to: www.novonordisk-trials.com