# Clinical Study Results

AstraZeneca

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| **Research Sponsor:** | AstraZeneca AB |
| **Drugs Studied:** | Dapagliflozin and saxagliptin |
| **National Clinical Trial #:** | NCT02471404 |
| **Eudra CT #:** | 2015-002376-24 |
| **Protocol #:** | D1689C00014 |
| **Study Date:** | September 2015 to March 2017 |
| **Short Study Title:** | A study to learn if dapagliflozin or dapagliflozin plus saxagliptin are as effective and safe as glimepiride in treating patients with type 2 diabetes. |

## *Thank you!*

As a clinical study participant, you belong to a large community of participants around the world. You help researchers answer important health questions and discover new medical treatments.

Thank you for taking part in this clinical study for the drugs dapagliflozin and saxagliptin. You and all of the other participants helped researchers learn how effective and safe these drugs are for treating patients with type 2 diabetes.

AstraZeneca AB, the sponsor of this study, thanks you for your help and thinks it is important for you to know the results of your study. An independent, non-profit organization called CISCRP prepared this summary of the study results for you with the help of a medical writing organization.

We hope this summary helps you understand and feel proud of your important role in medical research. If you have questions about the results, please speak with the study doctors or staff at your study site.

## What's happened since my study ended?

Your study started in September 2015 and ended in March 2017. It included 937 participants at 194 study sites in the Czech Republic, Germany, Hungary, Poland, and Slovakia. When the study ended, the sponsor reviewed the data and created a report of the results. This is a summary of that report.

## Why was the research needed?

Diabetes is a disease that makes your blood sugar levels rise above normal. This can cause serious health problems such as eye, kidney, and nerve diseases. Type 2 diabetes is the most common form of diabetes. Researchers want to find new treatments, because the treatments used now do not work well for everyone.

Before patients can take a new drug, the company that develops it must do research studies to show it is safe and effective. In this study, researchers learned about taking drugs called dapagliflozin and saxagliptin. These drugs are already approved to treat type 2 diabetes. There were also 2 other diabetes drugs used in this study, metformin and glimepiride. Researchers wanted to learn how different doses of dapagliflozin and saxagliptin affected patients who were already taking metformin.

Researchers also used a placebo in this study. A placebo looks like the study drug but contains no real medicine. Researchers use placebos in studies to compare the results for participants who take study drugs to the results for participants who take no medicine at all.

Researchers in your study wanted to know:

- Did blood sugar levels change for participants who got the different drugs?
- Did the different drugs affect participants in other ways?
- What medical problems did participants have after they got the different drugs?

## What kind of study was this?

Your study was a **"double-blind"** study. This means that none of the participants, study doctors, or staff knew what treatment each participant took. Some studies are done this way because knowing what treatment each participant takes can affect the results of the study. This way, the results are looked at fairly.

Your study included 937 men and women with type 2 diabetes. All of them were 31 to 75 years of age. Everyone in your study was also taking a diabetes drug called metformin, but needed more treatment to keep blood sugar levels from rising too high.

## What happened during the study?

You and the other participants were in the study for up to 55 weeks.

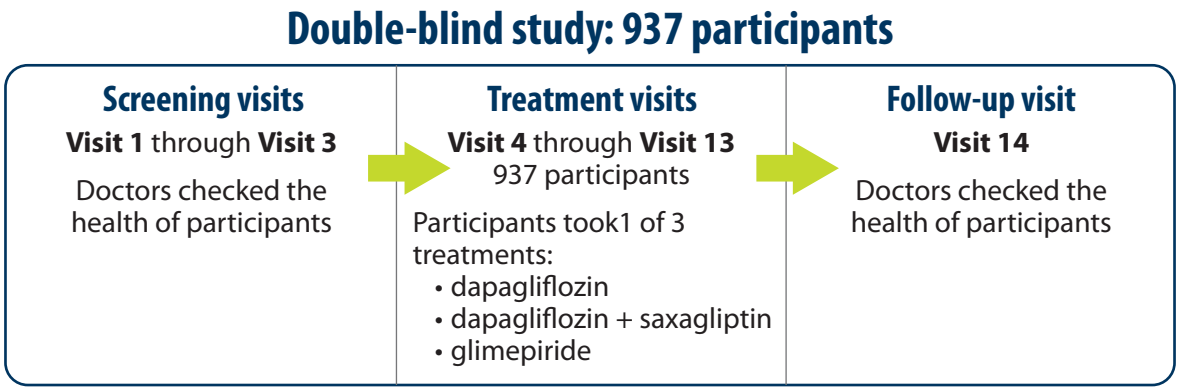
You visited the study site up to 14 times.

To see if you could join the study, study doctors did a physical examination by checking your height, weight, and temperature. Study doctors also took blood and urine samples and checked your heart health using an electrocardiogram, also called an ECG. They asked about your medical history, how you were feeling, and what medicines you were taking.

In this study:

- 313 participants took dapagliflozin
- 312 participants took dapagliflozin and saxagliptin
- 312 participants took glimepiride

You and the other participants were randomly assigned to take 1 of the treatments above and a placebo every day during the study. You took 4 pills each day. The figure below shows how the study was done.




Your study doctors examined you regularly during the study. This included checking your weight and heart health. They asked again about your medical history, how you were feeling, and what medicines you were taking.

You had a follow-up visit at the end of the study. During this visit, doctors checked your health again.

## What were the study results?

Below is a summary of the results of some of the questions the researchers asked during this study. It is important to know that researchers look at the results of many studies to decide which medicines work best and are safest for patients. Further clinical studies with dapagliflozin and saxagliptin are ongoing.

### Did blood sugar levels change for participants who got the different drugs?

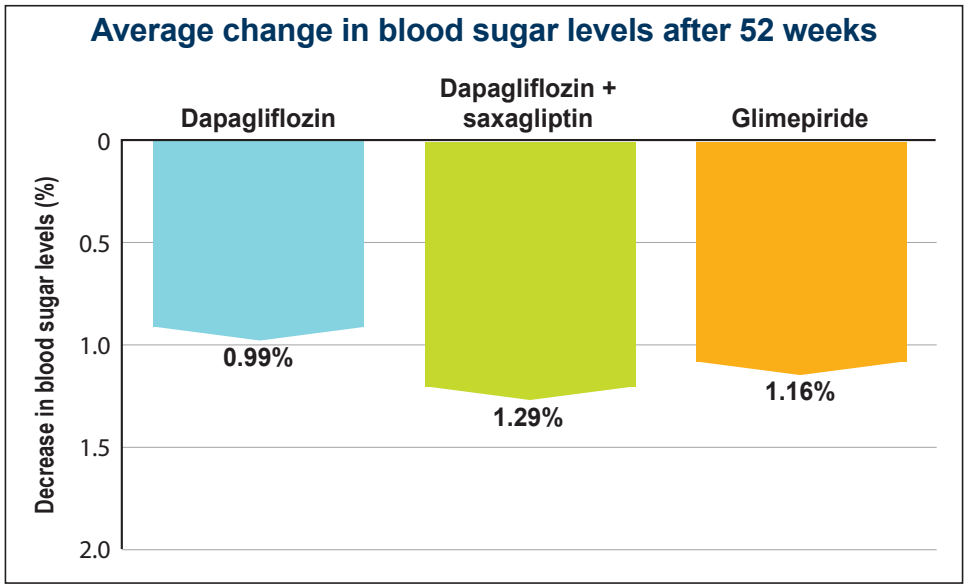
Researchers wanted to learn if participants' blood sugar levels changed after being in the study. Some participants left the study before it was finished, so researchers couldn't measure the change in blood sugar levels for everyone.

Overall, 72 participants left the study before it was finished. Researchers could only measure the change in blood sugar for participants who were in the study for at least 52 weeks. This was in 202 participants who took dapagliflozin, 257 participants who took dapagliflozin and saxagliptin, and 222 participants who took glimepiride.

After 52 weeks of treatment, researchers found:

- Participants who took dapagliflozin had their blood sugar levels decrease by an average of 0.99%.
- Participants who took dapagliflozin and saxagliptin had their blood sugar levels decrease by an average of 1.29%.
- Participants who took glimepiride had their blood sugar levels decrease by an average of 1.16%.

The figure below shows these results.




## Did the different drugs affect participants in other ways?

Researchers wanted to learn if the study drugs affected participants in other ways.

One test they used was measuring the body mass index, also known as BMI, of participants. BMI helps doctors understand how much body fat participants have, based on their height and weight. A higher BMI means that a person has a higher percentage of body fat than a person with a lower BMI. The results below include the change in the BMI of participants, as well as other changes.

Researchers found that:

- Participants who took dapagliflozin and participants who took dapagliflozin and saxagliptin had a similar average decrease in their BMI. Participants who took glimepiride had a smaller average decrease in their BMI.
- Participants who took dapagliflozin and participants who took dapagliflozin and saxagliptin had fewer instances of their blood sugar being too low than participants who took glimepiride.
- Participants who took dapagliflozin and participants who took dapagliflozin and saxagliptin had a similar average decrease in their weight. Participants who took glimepiride had a smaller average decrease in their weight.
- Compared to the other 2 treatment groups, participants who took dapagliflozin and saxagliptin had the greatest decrease in their blood sugar levels when they took their treatment without food.
- Participants who took dapagliflozin and participants who took dapagliflozin and saxagliptin had a similar decrease in their risk of needing insulin injections because of low blood sugar. This decrease in risk was greater for these 2 treatment groups than for the group that took glimepiride.

## What medical problems did participants have?

A lot of research is needed to know whether a drug causes a medical problem, so researchers keep track of all medical problems that participants had during the study. These medical problems are called “adverse events”. They may or may not be caused by the study drug.

### How many participants had medical problems in the study?

The table below shows the medical problems that happened during this study.

| | Dapagliflozin (out of 313 participants) | Dapagliflozin + saxagliptin (out of 312 participants) | Glimepiride (out of 312 participants) |
|---|---|---|---|
| How many participants had medical problems? | 60.1% (188) | 50.6% (158) | 54.5% (170) |

## How many participants had serious medical problems?

A medical problem is considered serious when it is life-threatening, causes lasting problems, or needs hospitalization.

In this study:

- 39 out of 313 participants (12.5%) who took dapagliflozin had serious medical problems.
- 22 out of 312 participants (7.1%) who took dapagliflozin and saxagliptin had serious medical problems.
- 35 out of 312 participants (11.2%) who took glimepiride had serious medical problems.

The only serious medical problem that researchers thought was related to the study drugs was a urinary tract infection, which happened in 1 participant in the dapagliflozin group. No participants died during the study.

The table below shows the most common serious medical problems that occurred in at least 2 participants in any treatment group during the study.

| Most common serious medical problems | Dapagliflozin (out of 313 participants) | Dapagliflozin + saxagliptin (out of 312 participants) | Glimepiride (out of 312 participants) |
|---|---|---|---|
| Bulge in the spine | 0.6% (2) | 0.6% (2) | 0.6% (2) |
| Narrowing of tube that carries urine out of the body | 0.6% (2) | 0.0% (0) | 0.0% (0) |
| Stroke | 0.6% (2) | 0.0% (0) | 0.0% (0) |
| Heart disease | 0.3% (1) | 1.0% (3) | 0.6% (2) |
| Arthritis in joints | 0.3% (1) | 0.3% (1) | 0.6% (2) |
| Blood clot in the lungs | 0.0% (0) | 0.0% (0) | 0.6% (2) |
| Gallbladder problems | 0.0% (0) | 0.0% (0) | 0.6% (2) |
| Irregular heartbeat | 0.0% (0) | 0.0% (0) | 0.6% (2) |

## What were the most common medical problems in the study that were not considered serious?

The table below shows the most common medical problems that were not considered serious. These happened in more than 1 participant among all 3 treatment groups.

The medical problems that researchers thought were related to the study drugs were inflammation of the penis foreskin and urinary tract infection.

| Most common medical problems that were not considered serious | Dapagliflozin (out of 313 participants) | Dapagliflozin + saxagliptin (out of 312 participants) | Glimepiride (out of 312 participants) |
|---|---|---|---|
| Common cold | 9.3% (29) | 9.9% (31) | 11.9% (37) |
| Bronchitis (swelling in lungs) | 4.2% (13) | 3.8% (12) | 4.8% (15) |
| Back pain | 4.2% (13) | 2.9% (9) | 3.5% (11) |
| Urinary tract infection | 4.2% (13) | 2.9% (9) | 3.2% (10) |
| Inflammation of the penis foreskin | 3.2% (10) | 2.2% (7) | 0.0% (0) |
| Headache | 3.2% (10) | 1.0% (3) | 1.6% (5) |
| Bladder infection | 3.2% (10) | 1.0% (3) | 0.6% (2) |
| Decreased kidney function | 2.9% (9) | 1.3% (4) | 1.3% (4) |
| Diarrhea | 2.6% (8) | 1.6% (5) | 1.9% (6) |
| High blood pressure | 2.2% (7) | 3.2% (10) | 1.6% (5) |
| Joint pain | 1.0% (3) | 2.6% (8) | 1.3% (4) |
| Arthritis in joints | 0.3% (1) | 2.2% (7) | 2.2% (7) |
| Indigestion | 0.3% (1) | 1.9% (6) | 2.9% (9) |

## Where can I learn more about the study?

If you have questions about the results, please speak with the study doctor or staff at your study site. You can find more information about your study online at:

- www.clinicaltrials.gov. Once you are on the website, type **NCT02471404** into the search box called **"Other Terms"**. Then, click **"Search all studies"**.
- www.clinicaltrialsregister.eu Once you are on the website, click **"Home and Search"**, then type **2015-002376-24** in the search box and click **"Search"**.

Official study title: A 52-Week, Multi-Centre, Randomised, Parallel-Group, Double-Blind, Active-Controlled, Phase IV Study to Evaluate the Safety and Efficacy of Dapagliflozin or Dapagliflozin plus Saxagliptin compared with Sulphonylurea all given as Add-on Therapy to Metformin in Adult Patients with Type 2 Diabetes Who Have Inadequate Glycaemic Control on Metformin Monotherapy

AstraZeneca AB is the sponsor of this study and has its headquarters in Södertälje, Sweden.

The phone number for the AstraZeneca Information Center is 1-877-240-9479.

**The results presented here are for a single study. Other studies may provide new information or different results. You should not make changes to your therapy based on the results of a single study without first consulting your healthcare professional.**

## *Thank you*

It is said that the greatest gift is one which is given anonymously, giving when you do not know whether you will get direct personal benefit.

This is the gift that you have given by taking part in a clinical study. It is a brave and selfless act, one that advances medical knowledge and benefits public health.

Thank you for the gift of your participation in clinical research.

CISCRP
THE CENTER FOR INFORMATION & STUDY ON CLINICAL RESEARCH PARTICIPATION

The Center for Information & Study on Clinical Research Participation (CISCRP) is a non-profit organization focused on educating and informing the public about clinical research participation. CISCRP is not involved in recruiting participants for clinical studies, nor is it involved in conducting clinical studies.

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