



CLINICAL STUDY RESULTS

ENGAGE: Study to evaluate the effects of Dysport® injected into upper and lower limbs combined with a prescribed personal rehabilitation program (Guided Self-rehabilitation Contract)

This study showed that adult patients living with constant muscle spasms and weakness on one side of their body had improved limb movement when given Dysport® injections in both the upper and lower limbs, in combination with a prescribed personal rehabilitation program. The injections were well tolerated by patients.

The results shown in this summary represent one clinical study. Please be aware that other clinical studies may produce different results and patient outcomes may vary.

This lay language summary has been produced by a company independent of Ipsen. It has been reviewed by employees of Ipsen, as well as a group of laypersons.

WHAT WAS THE STUDY ABOUT?

“Spastic hemiparesis” is a disabling condition which causes constant muscle spasms and weakness on one side of the body. The constant muscle spasms make it difficult for patients to eat or get dressed without help. One-sided weakness can cause loss of balance, making it difficult to walk, and patients often struggle to grab objects. Physiotherapists can assess how far patients can move their limbs in different directions (called “range of motion”) and prescribe physical exercises. This can help make everyday movements easier.

Dysport® is licensed by the regulatory authorities to treat adults and children (two years and older) with spasms in their upper and lower limbs. It is injected directly into the muscles and works by temporarily blocking the signals from the nerves that cause the spasms.

The main aim of the study was to see if Dysport® injections given on two separate occasions in both the upper and lower limb muscles, in combination with a prescribed personal rehabilitation program, could improve the range of motion for patients with spastic hemiparesis.

The study took place in 18 centres in four countries (Czechia, France, Russia and the United States) between December 2016 and July 2018. In total, 160 patients joined the study.

WHO COULD TAKE PART IN THE STUDY?

To take part in the study, patients had to be aged 18 years or older, suffered a brain injury (such as a stroke), and diagnosed with muscle spasms in their upper and/or lower limbs.

WHO WAS UNABLE TO TAKE PART IN THE STUDY?

Patients were unable to take part in the study if they previously had surgery on the muscles, tendons, nerves, or bones of their affected limbs. Of the 160 patients who initially joined the study, three were unable to take part.

WHO TOOK PART IN THE STUDY?

Of the 157 patients who were able to take part, four did not complete their prescribed personal rehabilitation program. Complete results were available for 153 patients.



153
PATIENTS



100
MEN



53
WOMEN



55 YEARS
AVERAGE* AGE

*The average reported in this summary is the median (“middle value”).

WHAT TREATMENTS WERE USED?

DYSPORT® INJECTIONS

An injection of Dysport® in the patient's upper and lower limb muscles were given on two separate occasions (called "treatment cycles").

AND

REHABILITATION PROGRAM

A physiotherapist taught each patient personalised stretches and physical exercises that they needed to perform on a daily basis.

A total dose of 1500 units of Dysport® was injected into the patient's upper and lower limb muscles at each treatment visit. The dose given in each limb was decided by the study doctor based on which limb was affected the most by muscle spasms.

Stretches and exercises were prescribed as part of a personal rehabilitation program. This was a "moral contract" where both the patient and therapist made a commitment to each other. It is also known as a "Guided Self-rehabilitation Contract". The patient made a commitment to do their exercises on a daily basis and complete an exercise diary. The physiotherapist committed to phoning the patient every two weeks to see how they were managing with their rehabilitation program.

HOW DID THE TREATMENT MAKE PATIENTS FEEL?

During clinical studies, patients are asked to report if they feel unwell or notice anything different about their bodies. If the study doctor thinks these feelings or changes may be related to the treatment the patient is taking, it is called a treatment-related side effect or treatment-related adverse event.

Out of the 157 patients who were given Dysport® injections, 21 (13%) had a side effect which the study doctor thought was related to Dysport®. The most common side effects are shown below. Some patients had more than one side effect, so they are counted more than once.

LACK OF ENERGY

3% | 4 out of 157

LIMB PAIN

2% | 3 out of 157

WEAK MUSCLES

2% | 3 out of 157

LACK OF STRENGTH

1% | 2 out of 157

BLURRED VISION

1% | 2 out of 157

The numbers and percentages above show how many patients had a treatment-related side effect out of the total number of patients who were given Dysport® injections.

Any side effect that is life-threatening or requires a person to go to hospital is called a “serious side effect”. In this study, two patients had a serious side effect that the study doctor thought was related to Dysport®. One patient died during the study, but their death was not caused by the treatment they received.

WHAT WERE THE RESULTS?

What percentage of patients had improved range of motion after two cycles of Dysport® injections AND completing their rehabilitation program?



72%

At the end of the study, 98 out of 136* patients (72%) had a meaningful improvement in the range of motion of their affected limbs. This means, approximately 3 in 4 patients had a meaningful improvement.

**136 out of the 157 patients who took part had enough data on both their range of motion AND rehabilitation program.*

How beneficial were Dysport® injections combined with a personal rehabilitation program?

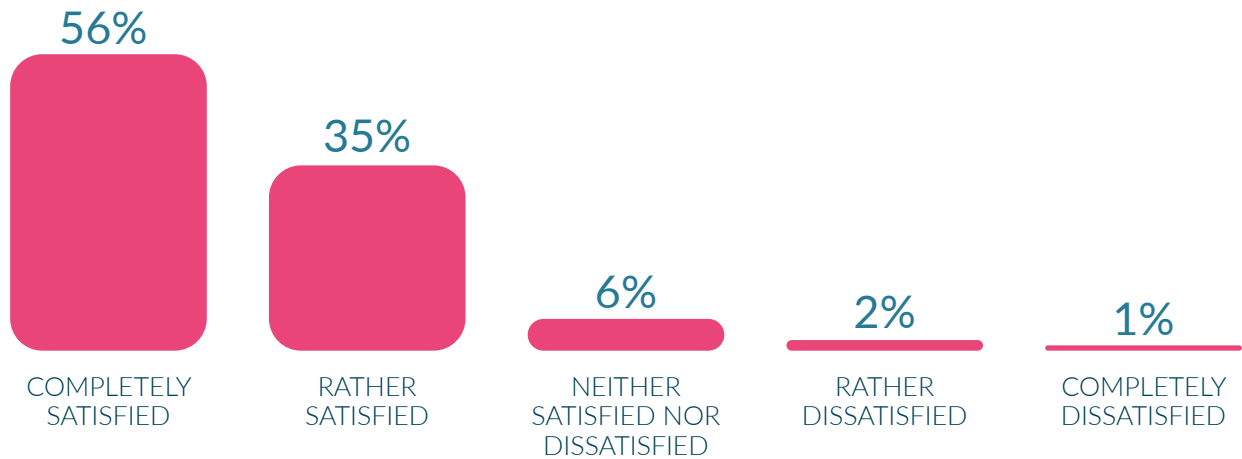
As part of the study plan, the researchers had lots of questions they wanted to answer to understand how beneficial Dysport® injections, and a personal rehabilitation program, were for patients with spasticity.

They assessed each patient’s range of motion at the beginning of the study, after the first and second treatment cycle of Dysport® injections, and throughout the study. They also assessed how well each patient could move certain muscle groups in their upper and lower limbs, their ability to complete physical tasks, and their average walking speed.

The results showed that patients had a meaningful improvement in their range of motion after the first injection cycle, with many patients seeing an improvement as early as 6 weeks. On average, patients experienced improved movement for around 16 weeks before needing further injections. More patients had a meaningful improvement after their second injection cycle. The researchers also found that overall, an improvement was seen in patient walking speeds, and their ability to complete physical tasks.

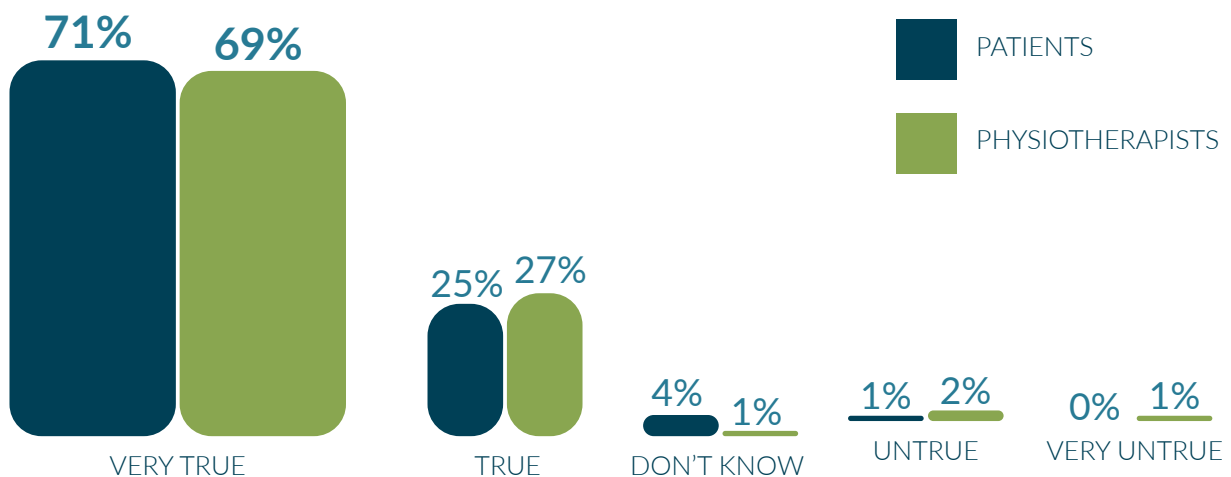
How satisfied were the patients with their rehabilitation program?

At each study visit, patients were asked how satisfied they were with their rehabilitation program. At the end of the study, more than half of the patients (56%) said they were “completely satisfied”.



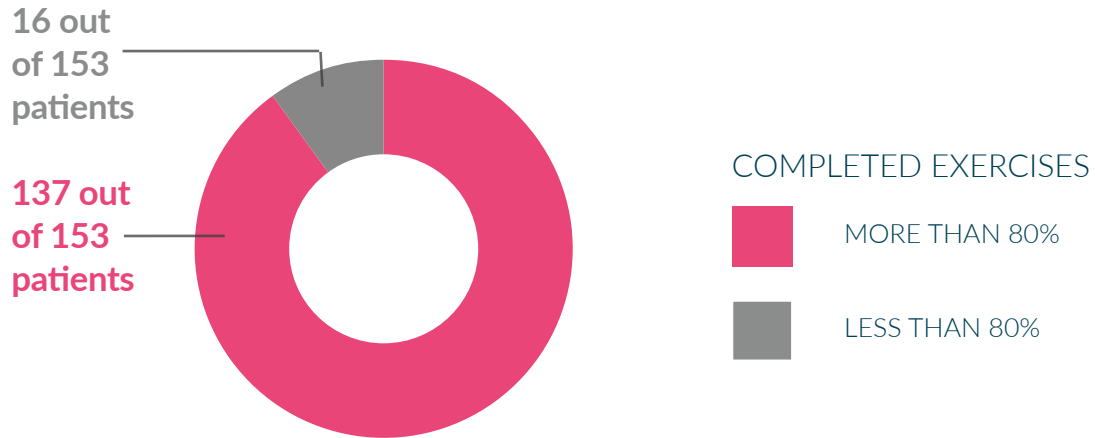
Did the patients and physiotherapists think a personal rehabilitation program would be helpful?

At each study visit, patients and physiotherapists were asked to record on a scale whether they believed the rehabilitation program would help to improve upper and lower limb movement.



At the beginning of the study, 108 out of 153 patients (71%) believed it was “very true” that their rehabilitation program would help to improve their upper and lower limb movement. More than two thirds of physiotherapists (69%) believed it was “very true” that a personal rehabilitation program would help their patients. The opinions of both patients and physiotherapists did not change drastically during the course of the study.

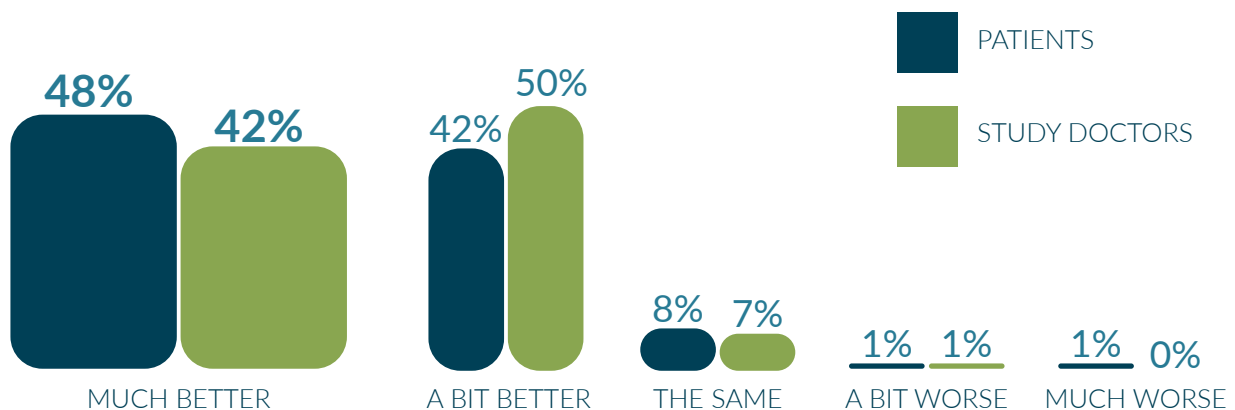
How many patients completed their daily stretches and exercises?



How satisfied were patients with a longer interval between the two injections?

Patients received their Dysport® injections between 12 and 20 weeks apart, depending on when the study doctor thought they needed the second treatment. The average time before needing the second treatment was around 16 weeks. The majority of patients who had their injections more than 12 weeks apart were satisfied with the longer interval between their injections.

Did the patients and study doctors think Dysport® injections and a personal rehabilitation program was beneficial?



At the end of the study, nearly half of the patients (48%) rated their overall improvement as “much better”. Less than half of the study doctors (42%) rated their patient’s overall improvement as “much better”.

Did the treatment improve quality of life and wellbeing?

Patients were asked at the beginning and end of the study to complete two questionnaires; one was designed to understand quality of life and one was designed to assess general health and wellbeing.

Quality of life

At the beginning of the study, patients had overall poor quality of life. The majority of patients (94%) had problems walking, 81% had difficulty washing or dressing themselves, and 94% were unable to do their usual activities.



Unfortunately, no notable improvement in overall quality of life scores were seen at the end of the study.

General health and wellbeing

Patients were asked to rate their overall health both physically and mentally.



When the researchers compared all of the responses given at the beginning of the study with those given at the end of the study, the results showed an improvement in how patients rated their physical health, but not their mental health.

Patients with spastic hemiparesis who were given Dysport® injections in both their upper and lower limbs, in combination with a rehabilitation program, showed an improvement in their range of motion.

The treatment was generally well-tolerated, and the side effects seen were in line with the known side effects of Dysport® in patients with muscle spasms.

MORE INFORMATION

For a full report on this study, please visit clinicaltrialsregister.eu and search for study number 2016-001989-29. Alternatively, you can visit clinicaltrials.gov and search for study number NCT02969356.

For more information about spastic hemiparesis and current treatments available, please speak to a healthcare professional.

If you have any questions about this study, please contact the sponsor, Ipsen at:

 clinical.trials@ipson.com

FUTURE RESEARCH

Studies to further understand the use, benefit and safety of Dysport® in spasticity are currently ongoing and others are planned. Please follow the links below to find out more information:

[A-US-52120-330 Children with lower limb spasticity](#)

[F-FR-52120-255 Adults with lower limb spasticity](#)

[F-FR-52120-258 Stroke survivors with spasticity](#)

STUDY IDENTIFICATION AND OTHER INFORMATION

FULL STUDY TITLE: An international, multi-centre, prospective, single arm study to assess the effect on voluntary movements of AbobotulinumtoxinA 1500 U administered in both upper and lower limbs in conjunction with a guided self-rehabilitation contract in adult subjects with spastic hemiparesis.

STUDY NUMBERS: Europe: 2016-001989-29 | United States: NCT02969356 | Protocol: F-FR-52120-228.

OTHER INFORMATION: This was a phase 4 study. Phase 4 studies occur after the treatment is released to the public in order to track effects of long term use and commonly reported side effects.

We thank all of the patients who took part in this study. Without their support, advances in treatments for medical conditions would not be possible.

We would also like to thank the patients and professionals from Stroke Alliance for Europe (SAFE) who took the time to review this document to make it easier for patients and the public to read.