



Annual Report 2017

GLA:D[®]

SDU 

GLA:D® Annual Report 2017



GLA:D®



Treatment for knee and hip osteoarthritis



In Denmark since 2013



GLA:D® has been exported to Canada, Australia and China

Good Life with osteoArthritis in Denmark (GLA:D®) is an initiative from the Research Unit for Musculoskeletal Function and Physiotherapy at the University of Southern Denmark.

GLA:D® represents an evidence-based treatment plan for knee and hip osteoarthritis consisting of patient education and neuromuscular exercise with the overarching aim of implementing current clinical guidelines for osteoarthritis into clinical care.

GLA:D® is available all over Denmark. At end-2017, a total of 1,109 clinicians had completed the GLA:D® course and 383 units, including 34 municipal rehabilitation centers, had treated GLA:D® patients.

Over the last 5 years, close to 30,000 patients have completed GLA:D® treatment plans.

The GLA:D® Annual Report 2017 presents an overview of the results that patients have achieved, including reduced pain, reduced intake of painkillers, improved physical function and quality of life.

Happy reading!



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Physical Therapist and Professor,
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What is GLA:D®?



GLA:D®

- Patient education**
2 x 1 ½ hours
- Presentation by former GLA:D® participant**
- Supervised neuromuscular exercise**
6 weeks - twice a week

The overarching aim of GLA:D®

- Equal access for all osteoarthritis patients to evidence-based patient education and exercise irrespective of place of residence and financial situation.
- Surgery is indicated only when non-operative treatment fails.

Three mandatory elements of GLA:D®

- Education of physical therapists in delivering patient education and neuromuscular exercise training,
- Two sessions of patient education and a minimum of 6 weeks of neuromuscular exercise for patients at the individual GLA:D® units,
- Registration of patient data in the national GLA:D® registry.

GLA:D® patient objectives

- Increased physical function
- Reduced pain
- Reduced intake of painkillers
- Improved quality of life

The aim is that this will result in a decrease in health care visits and thus lower costs for the individual patient and society.

National clinical guidelines for treatment of knee/hip osteoarthritis:

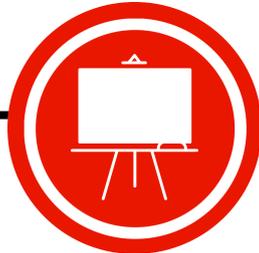
All patients should be offered the first line treatment, some may need supplementary treatment, while only 10-15 % need surgery in the form of joint replacement.



GLA:D[®] in clinical practice



Clinicians complete a two-day course at SDU



The course is a combination of theoretical lectures and practical exercises



GLA:D[®] is primarily offered by private clinics and municipal rehabilitation centers



Patients with knee or hip osteoarthritis are typically referred to GLA:D[®] by their general practitioner or by an orthopaedic surgeon, but they may also self-refer to a GLA:D[®] unit



The GLA:D[®] programme offered to patients includes patient education, lectures by a former GLA:D[®] participant (not mandatory) and a neuromuscular exercise programme twice a week for a minimum of 6 weeks

GLA:D® all over Denmark

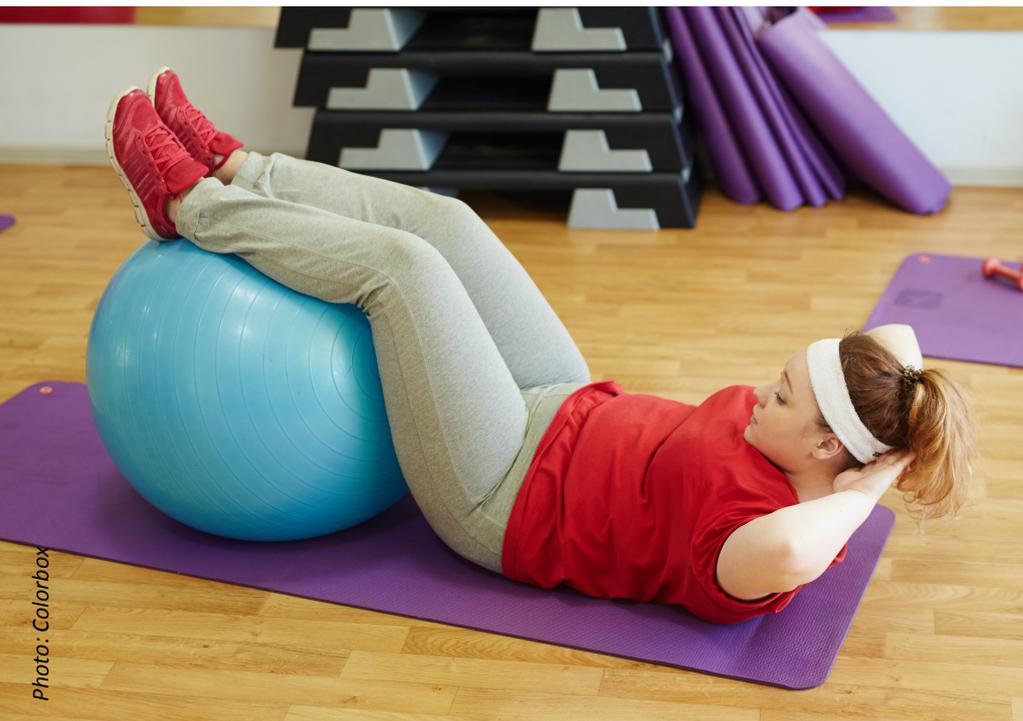
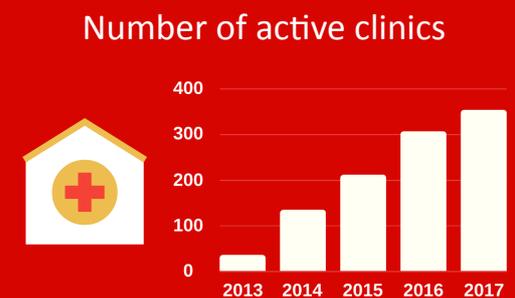
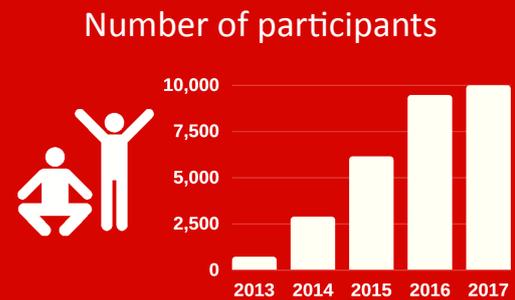


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GLA:D® is available in all parts of Denmark

From 2013 to 2017, 383 different GLA:D® units, including 34 municipal rehabilitation centers, offered GLA:D® programmes.

A total of 14% of the programmes were available at municipal rehabilitation centers, whereas the rest were offered by private clinics. Projections indicate that municipal rehabilitation centers will account for an increasing number in the years to come. Roskilde and Copenhagen ranked as the two busiest GLA:D® units.

From 2013 to 2017, SDU held 15 courses for clinicians with a total of 1,109 participants.

Almost 30,000 patients

From 2013 to 2017, 29,119 GLA:D® programmes were commenced.

The annual number of GLA:D® patients increased from year to year. However, the increase slowed slightly from 2016 to 2017.

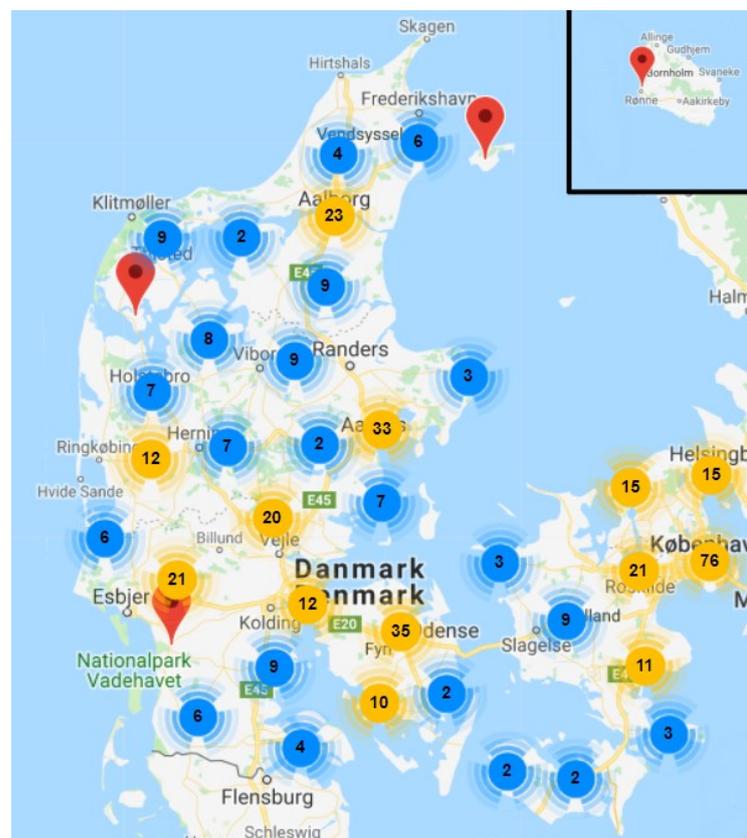
Each GLA:D® unit treated an average number of 20 patients in 2013 compared with 28 patients in 2017.

High degree of participant satisfaction

After completing the GLA:D® programme, nine out of ten indicate that they are pleased or very pleased with GLA:D®.

Also, nine out of ten state that they apply what they have learned from GLA:D® at least once a week.

Geographical location of active GLA:D® units



Who participated in GLA:D®?



Sex and age

A total of 72% of the GLA:D® patients were women and 28% were men. However, the portion of men seems to be on the rise.

The patients were between 15 and 91 years old. The average age was 64.9 years and is slowly increasing. On average, the knee patients were 64.4 years old and the hip patients were 66.1 years old.

The typical GLA:D® participant is a 65-year-old, overweight woman with knee pain

Knee and hip

Three out of four reported the knee as their primary problem and one in four reported the hip as their primary problem.

Knee patients had an average duration of symptoms of 46 months and hip patients had an average duration of symptoms of 36 months. The duration of symptoms is decreasing.

Overweight

The average BMI amounted to 28.3. Knee patients had an average BMI of 28.7 and hip patients 27.0. A total of 74% of knee patients and 62% of hip patients were overweight.

Previous injury and other diseases

Half of the knee patients and one third of the hip patients had a history of previous knee/hip injury. Half of the knee patients were experiencing problems with the opposite knee and one in five was also having hip problems. One out of four hip patients were experiencing problems with the opposite hip and one in three was also having knee problems.

Other diseases are common. One in three was suffering from high blood pressure. Heart and lung diseases or diabetes were reported by 6-8% of the patients.

Results after GLA:D®

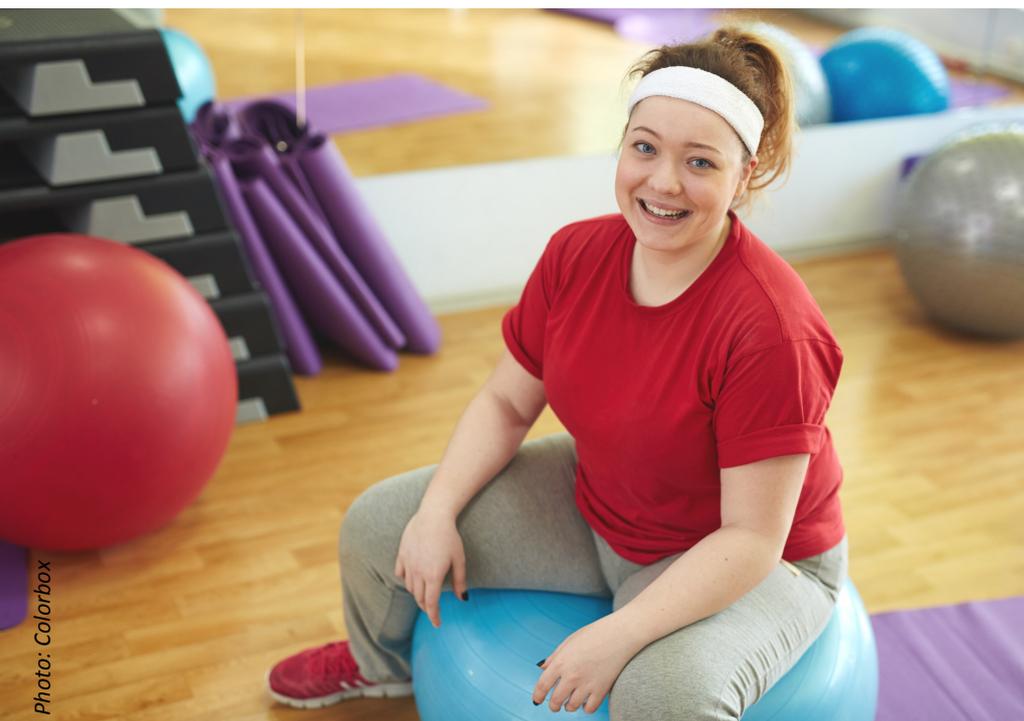
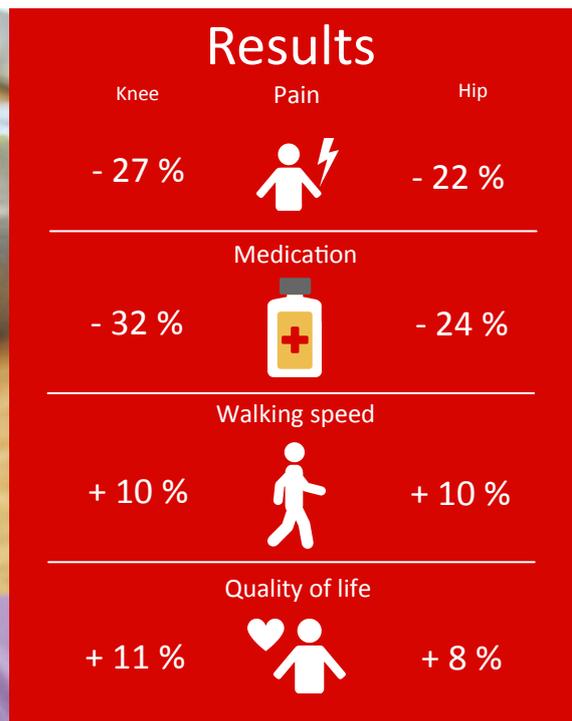


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Reduced pain

After GLA:D®, the average knee/hip pain intensity decreased by 27% (from 47.9 to 35.0 mm on VAS 0-100) for knee patients and 22% (from 47.3 to 36.8 mm on VAS 0-100) for hip patients.

Reduced pain and intake of painkillers, improved physical function and quality of life

Reduced intake of painkillers

After GLA:D®, the number of patients reporting having used either paracetamol, NSAID or opioids/opioids-like medications within the past three months fell by 32% for knee patients (from 62 to 42%) and by 24% for hip patients (from 65 to 49%). The number of patients reporting having used opioids/opioids-like medications within the past three months fell from 7 to 4% for knee patients and from 8 to 5% for hip patients.

Improved physical function

For both knee and hip patients, the average walking speed increased by 10% from 5.0 km/h before GLA:D® to 5.5 km/h after GLA:D®. Before GLA:D®, 1.8% of the patients used walking aids during the functional test and after GLA:D®, this number had fallen to 1.1%.

Higher quality of life

After GLA:D®, average joint-related quality of life increased by 11% for knee patients and 8% for hip patients.

Compliance in GLA:D®

8 out of 10 attended both education sessions and 8 out of 10 participated in at least 10 group-based exercise sessions.

Results 1 year after GLA:D®



Reduced pain

The reduction in pain was maintained one year after commencement of the GLA:D® programme. The knee patients experienced an average pain reduction of 27% and the hip patients experienced an average pain reduction of 26% compared with before GLA:D®.

Reduced pain, higher quality of life and fewer sick leaves

Higher quality of life

One year after commencing the GLA:D® programme, patients reported a further improvement in average joint-related quality of life. Knee patients reported a 17% improvement and hip patients a 19% improvement compared with before GLA:D®.

Fewer sick leaves

Among the knee patients who had not undergone joint replacement surgery during the follow-up period, the number of joint-related sick leaves within the last year fell by 44% from 695 knee patients before GLA:D® to 388 one year after commencement of the GLA:D® programme.

Among knee patients who had undergone joint replacement surgery during the follow-up period, the number of joint-related sick leaves within the last year almost doubled from 72 knee patients before GLA:D® to 134 one year after commencement of the GLA:D® programme.

Hip patients who had not undergone joint replacement surgery during the follow-up period saw a 25% fall in the number of joint-related sick leaves within the last year. The number fell from 101 hip patients before GLA:D® to 76 one year after commencement of the GLA:D® programme. Hip patients who had undergone joint replacement surgery during the follow-up period saw a fivefold increase in the number of joint-related sick leaves from 19 before GLA:D® to 99 one year after commencement of GLA:D®.

Patients who had joint replacement

After one year, 8% of knee patients and 17% of hip patients reported having undergone joint replacement surgery after joining GLA:D®. The analyses have been repeated excluding patients who have had joint replacement and only sick leave was significantly affected by this.

GLA:D® in 2017



GLA:D® in China

GLA:D® China was started by orthopaedic surgeons from Peking University People's Hospital in cooperation with GLA:D® in Denmark. The first GLA:D® course in China was held in September 2017. Traditionally, physical therapists are not involved in treatment of patients suffering from osteoarthritis in China; consequently, orthopaedic surgeons and nurses are in charge of GLA:D® in China. It has been a long process, where the Chinese delegation visited SDU and vice versa to make sure that the quality of the treatment lived up to the standards of GLA:D®. The results from the first 147 GLA:D® patients in China are uplifting as pain was reduced by 40% at the same time as patients' physical function improved.

Pilot project in Nigeria

In 2017, GLA:D® was tested in a small pilot project in Nigeria in connection with Christina Hvidtfeldt's bachelor thesis in physiotherapy. Christina did a great job in cooperation with researchers and clinicians in Nigeria. Patient feedback was positive, and they experienced improved function after participating in GLA:D®. It will be interesting to see if GLA:D® can gain a foothold in Nigeria.

Master's theses in physiotherapy

In the spring of 2017, Johan R Laursen and Mia Boye Nyvang defended their master's theses at SDU based on data from GLA:D® knee patients. They were entitled "Association between clinical experience and patient reported outcome in clinical practice, based on the approach according to Good Life with osteoarthritis in Denmark" and "Identification of predictors to recognize patients with an unfavourable outcome in Project GLA:D®".

Consumption of painkillers

Two Swedish medical students, Patricia Goro and Emily Gromelsky Ljungcrantz, visited SDU in the autumn of 2017. They investigated the consumption of painkillers among GLA:D® knee and hip patients and helped create an improved categorisation of the different drugs included in the GLA:D® registry.

Contact GLA:D®



Contact



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Support for clinicians:
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Data basis

The analyses included in this Annual Report are based on data from the GLA:D® registry collected from 29th January 2013 up to and including 31st December 2017.

A total of 88% of the patients who have completed the first visit at the physical therapist have filled in the patient questionnaire. After completion of the treatment programme, the response rate is 84% and 12 months after the first visit, the response rate is 70%. The response rate for the physical therapist's form after completion of the treatment plan is 72%. The response rate for the test results form before and after the treatment is 96% and 74%, respectively. The calculations exclude participants who left the programme without completing it, and it has been taken into account that the questionnaires may be delayed for up to one month.

The analyses of results after GLA:D® are based on programmes that include data from before and after the treatment as well as one-year follow-up data. Only patients who were not retired or on early retirement both before and after GLA:D® are included in the sick leave analysis.

Interpretation of results

The analyses included in this Annual Report are entirely descriptive and the results should be interpreted with caution.

The data are based on validated questionnaires, objective functional tests and questions whose validity has not yet been examined. We have strived to achieve as high validity in data collection as possible under the given circumstances, where data are collected in clinical practice without optimal control. It cannot be ruled out that some data may be associated with uncertainty.

To rule out competing causal factors, the analyses have been repeated excluding patients who have had joint replacement surgery during the follow-up period. Consequently, the most obvious competing causal factor has been taken into account. The analyses do not involve a control group, and therefore it is possible that other factors than the GLA:D® programme may have affected the results.

The majority of GLA:D® participants are people who are able and willing to pay for a treatment plan in a private clinic and who are able to attend appointments at the clinic. Consequently, it cannot be ruled out that the composition of the patient population may have affected the results.

All in all, the generalisability of the results seems acceptable in relation to knee/hip osteoarthritis patients who are able and motivated to participate in GLA:D®; however, considering the above limitations.

The Annual Report has been prepared by: Dorte Thalund Grønne, Ewa Roos and Søren Thorgaard Skou, GLA:D®, Research Unit for Musculoskeletal Function and Physiotherapy, Department of Sports Science and Clinical Biomechanics, SDU, April 2018.
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