

GLA:D[®] Switzerland osteoArthritis Annual Report 2020



Editorial

GLA:D® Switzerland osteoArthritis (GLA:D® stands for Good Life with osteoArthritis in Denmark). It was rolled-out in this country in 2019 by the syndicate/IG GLA:D® Switzerland, and right from the start interest there was a lot of interest from physiotherapists and people with hip and knee arthritis. In addition, many referring doctors responded with enthusiasm to the new programme. And, had it not been for Corona, then...

GLA:D® Switzerland did not escape unscathed by the difficult year of 2020. In March 2020, many of the GLA:D® arthritis courses for patients had to be stopped and restarted in the autumn. The certification course for physiotherapists was paused and could only begin again in the autumn. Needless to say, in the past year over 200 physiotherapists have qualified. The staff at the universities – HES-SO Valais-Wallis, SUPSI in Manno and ZHAW in Winterthur – worked hard to be able to offer the certification course as an online course.

Behind the scenes in the first half of the year, the data register was optimized to make it more user-friendly for patients and physiotherapists, and for higher quality data to be collated.

We would like to thank Health Promotion Switzerland for their financial support and cooperation as well as the external evaluation facility Grünenfelder Zumbach GmbH for its concurrent evaluation. Both contributed valuable ideas to the projects.

The GLA:D® Arthritis Switzerland 2020 Annual Report presents the results of hip and knee arthritis sufferers who have participated in the GLA:D® Arthritis programme, that is: less pain, improvement in function and a better quality of life.

IG GLA:D® Switzerland wishes you an interesting read.



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Handwritten signature of Karin Niedermann in black ink.

Handwritten signature of Lara Allet in black ink.

Handwritten signature of Luca Scascighini in black ink.

The ® in GLA:D® stands for a 'quality-controlled programme' and does not represent a commercial interest.



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Legal data

Annual report of GLA:D® osteoArthritis Switzerland
Compiled and published by IG GLA:D® Switzerland

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Photo credit

Susann Bechter, Joyce Riper, Cordula Stegen

What is GLA:D®?

GLA:D® osteoArthritis is a treatment programme for hip and knee osteoarthritis. Under international recommendations, all people with hip and knee osteoarthritis should have access to patient education and neuromuscular exercises. The surgical treatment of osteoarthritis ought only to be considered when non-surgical treatments have not delivered any improvement. The programme consists of certification courses for physiotherapists, GLA:D® arthritis programmes and systematic recording of data to the GLA:D® register



1. Certification courses for physiotherapists

Physiotherapists learn how to deliver a GLA:D® osteoArthritis programme during a two-day certified course. All certified physiotherapists are listed by name on www.gladschweiz.ch.

2. GLA:D® arthritis programme for people with hip and knee osteoarthritis

The GLA:D® arthritis programme uses a uniform examination process and standardized, evidence-based, practice-proven consultation, education, and exercise program but with individualized options.

3. Systematic recording of data

In addition to the entrance and exit examinations, participant data is collected by means of questionnaires at follow-up sessions at eight and twelve weeks. All data collected are saved to the GLA:D® Switzerland osteoArthritis register in anonymous form. Reports of the results are produced annually.

The data are used to document progress and for quality assurance purposes. The standard data protection and privacy guidelines apply as set by the government.

3



Three individual sessions for the entrance examination, tests, and a practical introduction to the exercise programme

2



Two group sessions for consultancy and education

12



Twelve group sessions with neuromuscular exercises

1

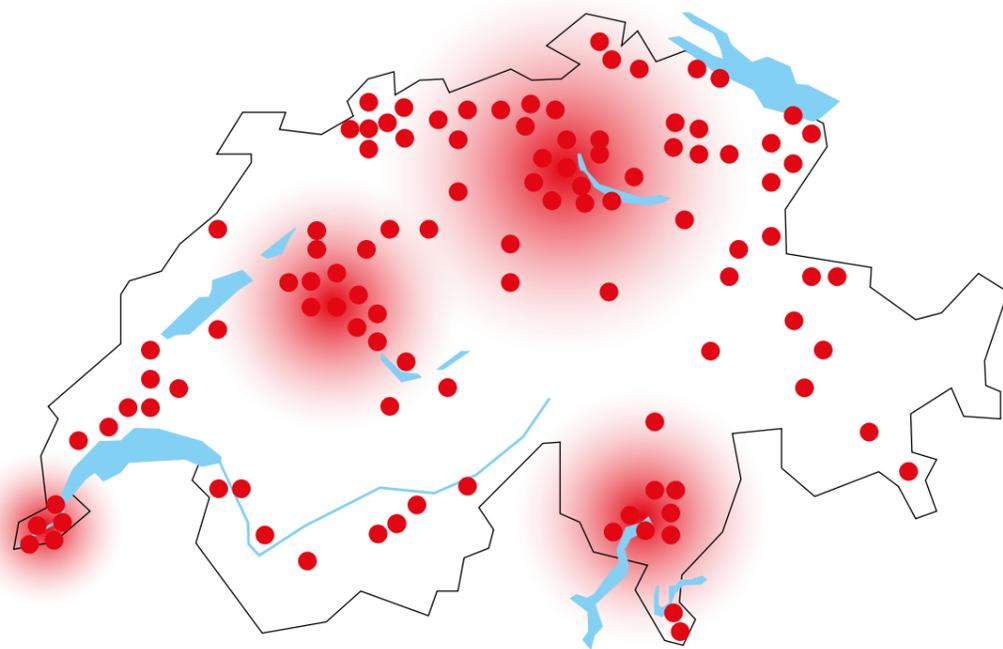


One individual session for the exit examination, including a short report to the referring physician

Where is GLA:D® delivered?

The certification course for physiotherapists and the GLA:D® osteoArthritis programme for people with hip and knee osteoarthritis has been offered across the whole of Switzerland since 2019.

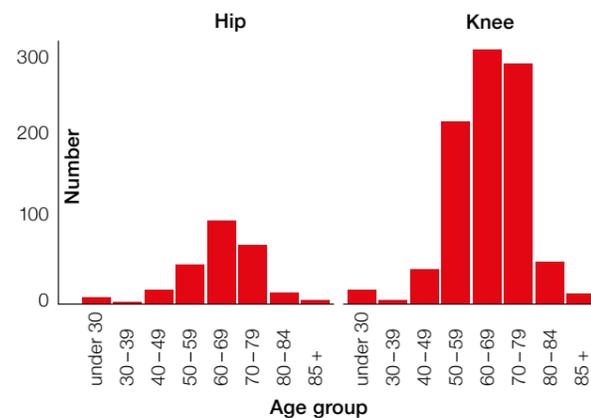
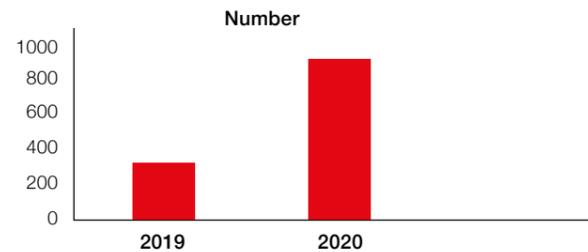
In 2019 and 2020, a total of 374 physiotherapists qualified in 233 clinics and practices from 19 cantons and the Principality of Liechtenstein. This means that the GLA:D® programme now is available in nearly all the regions of Switzerland.



The Patients

Number

The data from a total of 1218 participants have been collected since 2019 and saved to the GLA:D® register.
2019: 307
2020: 911



Gender and age

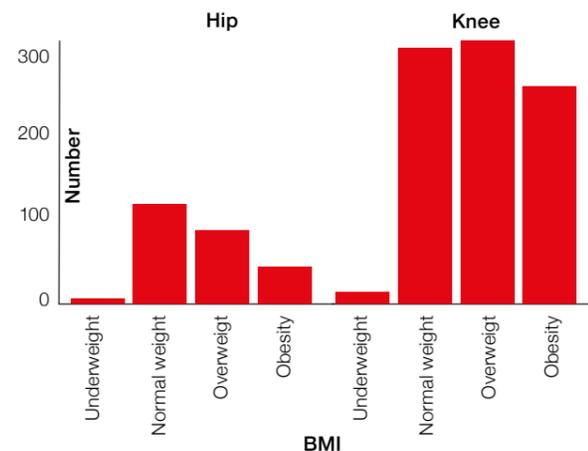
Of the 1218 participants, 794 (65%) were female and 411 (34%) male. The average age was 64.2 years (SD 12.5). The average age of participants with hip problems was 63.6 years, the participants with knee problems were slightly older at an average age of 64.7.

Knee and hip

960 (79%) of the participants were taking part in the GLA:D® programme due to knee problems and 258 (21%) due to hip problems.

Weight

The average Body Mass Index (BMI) of all participants was 27 (SD 5.2). The participants with hip problems had an average BMI of 25.6 (SD 4.8), 51% were overweight (BMI ≥ 25.0). The participants with knee problems had an average BMI of 27.4 (SD 5.2), 62% were overweight (BMI ≥ 25.0).



	Knee	Hip
X-ray	78%	82%
Surgery	52%	26%
Painkillers	56%	52%

Surgery

Previous surgery

Overall, 52% of the participants with knee problems had undergone an operation in the past. Of the participants with hip problems, this number was 26%. The most common operation of the participants with knee problems was a cartilage operation (32%), followed by a cruciate ligament operation (7%). Of the participants with hip problems, 9% already had a hip prosthesis, 7% of the participants with knee problems already had a knee prosthesis. The participants with prostheses were only included in the register when the participant had not undergone surgery on the joint causing them problems.

Planned surgery

Of the participants with knee problems at the start of the GLA:D® programme, 4% had surgery planned. Of the participants with hip problems, this number was 6%. After completing the programme, the number was reduced to 3% of the participants with knee problems and 5.8% of participants with hip problems.

Duration of symptoms

The average duration of the symptoms at the start of the GLA:D® programme was 54 months for participants with knee problems and 33 months for participants with hip problems.

Prior injury and other illnesses

Of the participants with knee problems, 29% had suffered a knee injury in the past requiring a visit to the doctor. Of the participants with hip injuries this was 16%.

X-ray

More than three quarters of the participants with knee problems had an x-ray diagnosis of osteoarthritis (78%), of the participants with hip problems this was 82%.

The results after GLA:D®

The results show the changes to the data collected from the beginning of the programme to its conclusion about 8 weeks later.

All the data were rounded to one decimal point whereas the percentage calculations are based on non-rounded figures.

Reduced pain

Following GLA:D® pain was reduced on average by 29% for the participants with knee problems (from 5.0 to 3.5 on a numerical rating scale (NRS) 0-10) and by 24% for participants with hip problems (from 4.7 to 3.6).

Reduced consumption of painkillers

At the start of GLA:D®, 55.2% of the participants with knee problems had taken painkillers in the previous three months. Of the participants with hip problems, that figure was 53.3%. After GLA:D®, 36.9% of the participants with knee problems and 35.7% of the participants with hip problems were taking painkillers. This equates to a reduction in consumption of painkillers of 18% in each of the groups.

Improvement in function (everyday activities and ability to walk)

After GLA:D®, the average improvement in function of the participants with knee problems was 18%, from an average of 63.5 to 74.9 in the KOOS questionnaire on a scale of 0-100 (100=best rating). Of the participants with hip problems, there was an average improvement in function of 14%, from an average of 64.2 to 72.9 in the HOOS questionnaire on a scale of 0-100.

For participants with both knee problems and hip problems, the average maximum speed in the 40-meter paced walk test improved by 9% after GLA:D®. For participants with knee problems, there was an improvement from 1.7m/sec to 1.8m/sec, for participants with hip problems, there was an improvement from 1.7m/sec to 1.9m/sec. For the 30-second chair stand test, both groups improved by 18%. For participants with knee problems, the average number of repeats improved from an average of 13.6 to 16.1; for participants with hip problems, the repeats increased from 14.7 to 17.4.

Consistent participation in the GLA:D program

Approximately 90%, thus 9 out of 10 participants, attended all 4 individual sessions, the two patient education sessions and at least 10 training sessions.

	Knee 769 Participants	Hip 204 Participants
Pain (NRS)	-29%	-24%
Painkillers	-18%	-18%
Function	+18%	+14%
Quality of life	+27%	+13%



	Knee 769 Participants	Hip 204 Participants
Speed of Walking	+9%	+9%
30-second stand up	+18%	+18%
Hopping test	+39%	+18%

In the 40-meter paced walk test, before GLA:D® eight (0.8%) participants with knee problems used a walking aid, after GLA:D® three (0.3%); whereas for hip problems before GLA:D® there were four (0.4%) and no one after GLA:D®.

For the chair stand test, before GLA:D® 26 (2.7%) participants with knee problems needed the arm rest to stand up, whereas after GLA:D® 13 (1.4%); this was four (1.6%) participants with hip problems before GLA:D® and three (1.2%) after GLA:D®.

Participants with hip or knee problems took the single-leg hop test who were able to carry out the chair stand test exceeding a set number of times or had a faster speed for the paced of walk test. This was the case for 53% of participants (54% with knee problems, 50% with hip problems). The single-leg hop distance increa-

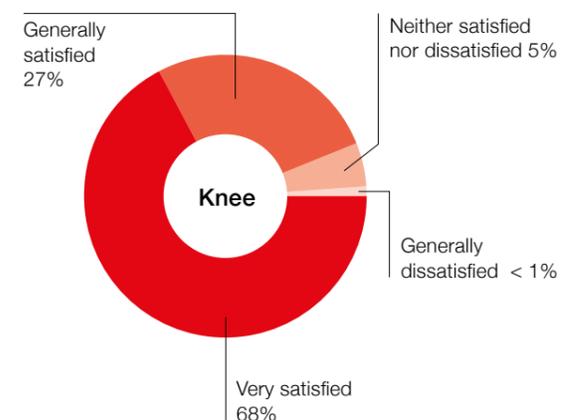
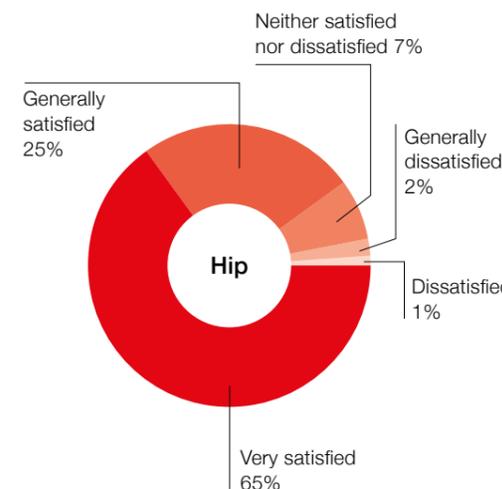
sed by 39% (from an average of 9cm to 13cm) and for participants with hip problems by 18% (from 20cm to 24cm).

Quality of life improvement

After GLA:D®, quality of life improved by 27% for participants with knee problems (from 44 to 55 in the KOOS questionnaire on a scale of 0-100 (100=best value)) and by 13% for participants with hip problems (from on average 50 to 57 in the HOOS questionnaire on a scale of 0-100).

Satisfaction

Overall, after completion of the GLA:D® programme, 90% of all participants with hip problems, and 95% of all participants with knee problems were 'very satisfied' or 'generally satisfied'.



The results 1 year after GLA:D®



	Knee 190 Participants	Hip 50 Participants
Pain (NRS)	-28%	-21%
Function	+12%	+15%
Quality of life	+24%	+23%

Pain

The pain reduction for the participants was maintained one year after GLA:D®. In comparison to 'before GLA:D®' pain reduction was on average 28% for participants with knee problems (from 4.8 to 3.4 for a NRS 0-10) and 21% for participants with hip problems (from 4.5 to 3.5 for a NRS 0-10).

Improved functionality (everyday activities)

One year after GLA:D®, improvement in functionality for everyday activities gained from participation in the GLA:D® programme was maintained. In comparison to 'before GLA:D®', the function improvement of 12% seen by the participants with knee problems (from an average of 65.0 to 73.0 in the KOOS questionnaire on a scale of 0-100) and by 15% for participants with hip problems (from an average of 62.6 to 71.8 in the HOOS questionnaire on a scale of 0-100).

Improvement in quality of life

One year after GLA:D®, the quality-of-life improvement achieved by participation in the GLA:D® programme was maintained. In comparison to before GLA:D®, quality of life improved by 24% for participants with knee problems (from average 44.3 to 54.6 in the KOOS questionnaire on a scale of 0-100). Interestingly, there was a further improvement in quality of life for participants with hip problems one year after, in comparison with immediately after exiting the GLA:D® programme, from 13% to 23% (from an average of 45.8 to 56.4 in the HOOS questionnaire on a scale of 0-100).

Conclusion

These results compare well in terms of trends and scale to those of the Denmark data, the data set with more than 50,000 participants of 2013-2019. Pain, walking and quality of life were substantially improved after three months and even after twelve months. It was particularly notable that there was no decrease in the figures after twelve months as is generally seen for other treatment methods. Once the programme had been completed, the participants appeared to have sufficient skill to manage their knee and hip problems on their own. This was confirmed by the long-term results after twelve months from Denmark.

Concluding report

After the GLA:D® programme has been completed, the results from the questionnaires and the clinical tests are compiled in a report for the participant and the participant's referring doctor.

Final medical report on the treatment of Anna Musterfrau, 02.11.1956
 Treatment from "06.07.2020" to "14.09.2020"

Checklist for the clinical diagnosis of knee osteoarthritis*:
 9 of the 10 criteria are met.

Symptoms:		Risk factors:	
<input checked="" type="checkbox"/>	Load-dependent pain	<input checked="" type="checkbox"/>	Age (40+)
<input checked="" type="checkbox"/>	Morning stiffness (< 30')	<input checked="" type="checkbox"/>	Overweight (BMI > 25)
Clinical observations:		<input checked="" type="checkbox"/>	Prior joint injury
<input checked="" type="checkbox"/>	Crepitus	<input type="checkbox"/>	Heavy physical work
<input checked="" type="checkbox"/>	Restricted mobility	<input checked="" type="checkbox"/>	Overuse in leisure time
		<input checked="" type="checkbox"/>	Family history of arthritis

Adherence to the GLAD programme:
 100% (18 of 18 appointments attended).

4	One-to-one sessions	2	Education	12	Exercise programme units
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Outcome Data:
Patient questionnaire:
 KOOS (Knee Injury and Osteoarthritis Outcome Score, 12 questions) with 3 aspects: pain, Activities of Daily Living (ADL) and Quality of Life (QOL).
Clinical tests:
 30s chair stand test
 40m paced walk test
 In the illustration, the values have been transformed to a scale of 0-100.
 0 = poor und 100 = good.

Caption:
 Blue = entrance / Yellow = exit

Recommendations:
 The patient would like to continue with the following recommendations:

Personal activities:	Supporting options:
<input checked="" type="checkbox"/> Stay active	<input type="checkbox"/> Mobility group of the Swiss Rheumatism Association
<input checked="" type="checkbox"/> Individually tailored physical training	<input type="checkbox"/> Fitness center
<input checked="" type="checkbox"/> Swiss hiking routes	<input checked="" type="checkbox"/> Home training
	<input checked="" type="checkbox"/> Follow-up courses at our institute

*References: (1) Zhang et al.: EULAR evidence-based recommendations for the diagnosis of knee osteoarthritis. Ann Rheum Dis 2010, 69(3):483-489. (2) Altman et al.: Development of criteria for the classification and reporting of osteoarthritis. Classification of osteoarthritis of the knee. Diagnostic and Therapeutic Criteria Committee of the American Rheumatism Association. 1986/0004-3591.

About GLA:D® Switzerland 2020

Certification course

In German-speaking Switzerland, a total of three certification courses were taught in 2020. The certification courses in March and May had to be cancelled. In January and in September courses took place at ZHAW, the November course was adapted allowing the theory to be taught online and the practical part (training for the tests, exercises and recording the data in the register) on the following day at the premises of ZHAW. At HES-SO Valais-Wallis a French-language certification course took place and at SUPSI an Italian-language certification course.

Marketing strategy

A marketing strategy had been approved, but its implementation was delayed due to the COVID-19 pandemic.

External evaluation

The project is funded by Health Promotion Switzerland and encompasses an external evaluation. The first evaluation was at the end of 2020. It focused on the project start and came to the following conclusion:

GLA:D® Switzerland got off to a good start and – regardless of the COVID-19 pandemic – it could be implemented as planned with one exception (integration of arthritis expert patients in the course). By switching the courses in part online, GLA:D® Switzerland has ensured that even after the pandemic, the quantity of courses available to patients will be as originally planned. Reimbursement for GLA:D® treatment by the health insurance companies was found to be uncompliated. Recommendations have been made to respond to the challenges identified for further implementation.



About GLA:D® international (GIN)

GLA:D® is a non-profit initiative of the University of South Denmark. GLA:D® osteoArthritis was originally launched in Denmark in 2013 and since then has certified over 1300 physiotherapists. Around 50,000 sufferers of hip or knee osteoarthritis have successfully completed the GLA:D® osteoarthritis programme (see the 2019 annual report for Denmark)

Since 2015, the GLA:D® osteoArthritis programme has been rolled-out internationally in Canada (2015), Australia (2016), China (2017), New Zealand (2019), Switzerland (2019) and Austria (2020). These countries are organized under the network of GLA:D International (GIN).

Biannual meetings for GIN members

GIN members meet twice a year under the chair of Prof. Dr. Ewa Roos (GLA:D® osteoarthritis) and Prof. Dr. Jan Hartvigsen (GLA:D® Backs) to exchange information, prepare a report on the working groups and research, and to discuss the further development of the project. The meetings usually take place once a year as part of the OARSI (OsteoArthritis Research Society International) congress, and once virtually. In 2020, both meetings were held virtually with over 50 representatives from the participating countries, nine of them from Switzerland. The reach of the network is highlighted by the time of the meetings: 12-2 pm European time (CET time), 6-8pm in Peking, 10-12pm in Auckland and 4am-6am in Edmonton, Canada!

There are currently five active GIN committees:

- Telehealth Committee: Preparation of the virtual GLA:D® osteoArthritis and back programmes for patients (the Swiss representative is Lara Allet and Luca Scascighini)
- Program Content Committee: Update of content, currently patient education material (the Swiss representative is Karin Niedermann)
- Core Variable Committee: International comparison of all recorded variables and national implementation of modifications (the Swiss representative is Roger Hilfiker)
- Communications Committee: Update of the international website, presentation of publications (the Swiss representative is Jolanta Boganski)

Annual Report
Denmark 2019



Development of the GLA:D® Back programme

Triggered by the massive success of the GLA:D® osteoArthritis programme and the equally large interest in implementing treatment guidelines for chronic backpain in the clinical setting, a GLA:D® Back programme was developed by a team from the University of Denmark. It has been delivered in Denmark since 2018 and in Switzerland since 2021. In Switzerland in 2020, preparations for a launch in February 2021 were well underway.

The table shows the activities in the participating countries

Country	Denmark		Canada	Australia	China	Switzerland		New Zealand	Austria
	OA	Back	OA	OA	OA	OA	Back	OA	OA
Year started	2013	2018	2015	2016	2017	2019	2021	2019	2020
Courses	22	13	27	29	2	11	(5) planed 21	2	3
Clinicians trained	1'531	653	1'377	1653	40	586	22	30	48
Active clinics	388	194	260	439	5	~100	-	3	7
Patients enrolled in registry	55'753	4'074	8'620	8'358	548	1'188 ^a	-	115	9

About GLA:D®

Interest Group GLA:D® Switzerland

The interest group was formed on 14 November 2018 and is composed of the following organizations:

ZHAW, Zurich University of Applied Sciences, Institute of Physiotherapy:

- Susann Bechter, Project Manager of GLA:D® osteo-Arthritis
- Dr. Thomas Benz, Project Manager of GLA:D® Backs
- Prof. Dr. Karin Niedermann, Head of Research GLA:D® osteoArthritis, spokesperson for the Health Promotion Switzerland
- Jolanta Boganski, Assistant
- André Meichtry, Statistics

HES-SO Valais-Wallis, Haute Ecole de Santé:

- Prof. PD Dr. Lara Allet, responsible for the French-speaking region of Switzerland; research
- Roger Hilfiker, responsible for the French-speaking region of Switzerland; research/statistics;
- Sophie Carrard, Assistant

SUPSI, Scuola Universitaria Professionale della Svizzera Italiana:

- Luca Scascighini, responsible for the Italian-speaking region of Switzerland; research
- Gianpiero Capra (responsible for continuing education in health)
- Barbara Pianezzi, Assistant

svomp, Swiss Association of Orthopaedic-Manipulative Physiotherapy:

- Felicitas Frank, President
- Rick Peters, Vice President

Sportfisio, The Swiss Sports Physiotherapy Association:

Prof. PD Dr. Lara Allet, Member of the Board

RLS, Rheumaliga Schweiz:

Martina Roffler, Head of Services



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Gesundheitsförderung Schweiz
Promotion Santé Suisse
Promozione Salute Svizzera

Thank you to all our network partners

We would like to thank the Swiss Society for General Internal Medicine, the Swiss Society for Rheumatology, Swiss Orthopaedics, the Swiss Society for Physical Medicine and Rehabilitation/Reha Switzerland and ChiroSuisse for their support.



SGAIM SSMIG SSGIM
Schweizerische Gesellschaft für Allgemeine Innere Medizin
Société Suisse de Médecine Interne Générale
Società Svizzera di Medicina Interna Generale
Swiss Society of General Internal Medicine



ChiroSuisse



swiss
orthopaedics



reha schweiz
Schweizerische Gesellschaft für Physikalische Medizin und Rehabilitation
Société Suisse de Médecine Physique et Réadaptation
Società Svizzera di Medicina Fisica e Riabilitazione
Swiss Society of Physical Medicine and Rehabilitation