



# ISST – International - Training Institute -

Effective conservative treatment for scoliosis  
Education and training for non-surgical scoliosis treatment



provided by: ISST – International  
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## Concept and Guidelines for ISST - Schroth Training

**ISST - course: International Schroth 3dimensional Scoliosis Therapy**  
according to Asklepios – Katharina Schroth

### Training for ISST – Schroth Therapists and ISST - Instructors

Under the leadership of Axel Hennes, PT, Senior Schroth Instructor

#### 1. Description and concept for ISST - Schroth Therapist course

- Based upon common physiotherapeutic principles the Schroth Therapy was founded by Katharina Schroth in 1920 and continuously refined through the experience of Schroth therapists from all around the world.

- The use of postural exercises for scoliosis therapy is grounded in scientific principles that relate directly to known aetiologies and symptoms of spinal deformity.

- ISST is using an individualized exercise program combining corrective behavioral patterns with physiotherapeutic methods. The 3D scoliosis treatment, based on sensorimotor and kinetic principles its goals are to facilitate correction of the asymmetric trunk and posture and to teach patients to consciously maintain the corrected posture increasingly more in daily living activities.

- Main elements of the treatment approach are the correction of reversible spinal dysfunctions, scoliosis specific passive mobilization, active 3D stabilization, Corrective Breathing, postural control, remedial education with a particular ADL aspect, developing a straightforward and safe home exercise program.

- Braces, if indicated and prescribed, are included in the therapeutic process helping patients to accept this useful therapeutic tool and use it also as therapeutic equipment to improve the quality of exercises, especially for the home exercise program.

In the ISST- training we will enlighten various scoliosis specific theoretical aspects in combination with functional parts of the therapy approach.

The course leads from the surface of scoliosis understanding to a more sophisticated and comprehensive clinical reasoning regarding the conservative management of scoliosis.



## Goals and Summary

The ISST training enables physical therapists to provide sufficient conservative treatment for patients with spinal deviations mainly for idiopathic scoliosis and kyphosis.

The goal is to prevent surgery, decelerate or stop the progression and develop effective coping strategies for the patients to improve their social participation and activities in their daily living. This also has a positive effect on the general HQL (health-related quality of life) for children, adults and elderly patients suffering from scoliosis and kyphosis.

The training enables PT's to understand the biomechanical conditions of the asymmetric postural aspects and asymmetric loading of the spine leading to functional and structural adaptations and a further risk of progression.

Specific physical therapy indicated for patients in a brace and patients reported for surgery or after surgery.

Therapists learn to define their role as team players in an interdisciplinary network of physicians, surgeons, orthopedic technicians (orthotists), parents, patients, psychologists.

- 1. Basics:** Aetiology, biomechanical concept, vicious cycle-concept, progression, postural imbalance, function and structure, brace, surgery
- 2. Medical assessment:** Visual-manual examination, a therapy protocol, X-ray evaluation, scoliometer, functional tests
- 3. Classification:** Schroth, King, Rigo, Lenke
- 4. Specific mobilisation:** Passive, assistive, active specific manual techniques: side bending, tilt, side shift, derotation, sagittal realignment
- 5. Breathing therapy:** Corrective Breathing: a specific internal detorsional force to reverse scoliotic features and mobilize restrictive chest dysfunctions
- 6. 3D Stabilization:** Exercises in the treatment of idiopathic scoliosis, from positioning to auto-self-correction
- 7. Activities of daily living:** Posture variations, natural approaches for leisure, helping to avoid progression and reduce asymmetric loading – instructions for working with Basic Tension, balancing exercises, and providing an individual adjusted intensive home-exercise program.
- 8. Sagittal correction:** Correction in the sagittal plane, easy to apply and essential for spinal stability especially in the lumbar area
- 9. Exercises with the brace:** Multidisciplinary concept including bracing

## 2. Eligibility to attend the ISST course

Schroth therapy is a physical therapy concept including manual techniques, and therefore the certification courses will be offered exclusively to physical therapists (physiotherapists). Interested physicians were referred to SOSORT, SRS, scoliosis meetings and conferences, as well as special courses or visitations in related clinical centers. Orthotists were referred to the ISST-training courses for orthotists in cooperation with Human Study.



## 2.1 SOSORT Guidelines

SOSORT (The International Society of Orthopedic Scoliosis Rehabilitation and Treatment) formed in 2004, with the key members of the leading European Schroth clinics as founding members. Since then, Schroth therapy has always been intimately involved in and follows the consensus recommendations of SOSORT. The 2011/2016 SOSORT consensus on treatment guidelines for conservative scoliosis treatment define the leading members of the multidisciplinary team as MD, orthotist, and physical therapist. The exercise methods being carried out under SOSORT treatment guidelines referred to “Physiotherapy Scoliosis Specific Exercises” (PSSE), which is inclusive of the Schroth Method.

## 3. ISST - Course Program for ISST-Schroth Therapist

The complete course includes two parts each five days with altogether 77 clinic hours (CEU). Study task 20 hours, and preparing cases 10 hours.

In the period between the intensive five days training sessions, the therapist has to implement and practice the learned elements thoroughly into his daily routine. The instructor makes an assignment of duties required to participate in the next part.

An exception is a ten-day course combining Part I and Part II due to training conditions in specific facilities.

The intention is to install a severe and intensive delving into practical experience.

Prices for the courses vary regarding the number of participants and local conditions.

### 3.1 ISST - Part I and ISST - Part II

#### 3.1.1 Part I Goals and Description

In the first course, it is the presentation of an overview regarding theory and practical parts of the approach combined with general information regarding scoliosis.

The students will learn to recognize scoliosis features, assess scoliosis, categorize patients and start to develop thinking in “Body Blocks” and necessary corrections in body planes around biomechanical axes. Corrective Breathing provides a fundamental element for the use of intrinsic forces to improve functional activities and mobility in the concavities of the deformed and altered trunk.

Positioning with simple tools is a crucial part in the learning process from a simple to a more complex understanding and also a first step in the adaptation of the ISST elements into the daily routine of the therapy process.

Participants learn the Basic Corrections including pelvic corrections with Basic Tension and assistive shoulder traction. Manual techniques will be used for proprioceptive teaching and to improve functional capability of the patients.

Basic 3 dimensional stabilizing exercises in stable positioning help to restore physiological alignment. Important is to adapt and internalize the typical exercise instructions to reach an automated state in the learning process.

At the end of part I the written exam takes place (see also certification and examination 3.2)



**Homework task/study task**

Between part I and part II participants have to prepare documentation of 2 case reports for two different patients. The documentation includes examination protocol, positioning diagram, photos from patients in a standing position (front-back-side-Adams test), with Basic Corrections in lying and sitting position and the therapy plan: 3 exercises, one breathing exercise, two mobilizing techniques, two home-exercises.

In part II these papers will be a prerequisite for the certification process; some of all of the case reports presented and discussed.

**Study task**

Students should study the 2016 SOSORT Guidelines for Scoliosis. Pubmed, scoliosis journal is an open access journal: <https://scoliosisjournal.biomedcentral.com/>.

The goal for the homework task and study is to work independently with the examination assessment tools and practice the evaluation, preparation, and documentation of the scoliosis specific therapy.

The case presentation in part II describes ways to install the program in the daily routine and offers the chance to discuss the limitations and the prospects of the approach.

Studying the Sosort Guidelines 2016 helps to understand the range of different less and more intensive conservative therapy elements (regular observation, exercise-based pro-active therapy, part-time/full-time bracing, surgical intervention) regarding the assessment of the risk of progression. To get in contact with the scoliosis journal is necessary to find more current and developing information in the scoliosis field.

**Objectives and Goals for Part I ISST Schroth Training**

	<b>Objective</b>	<b>Outcome examples</b>
<b>Knowledge</b>	To define, learn, and practice the material on general aspects of scoliosis, ISST Schroth principles and terminology, Schroth body blocks, ISST Schroth classification, therapy diagrams, clinical and radiological assessment as well as basic exercises in supine, prone, side-lying and sitting and basic scoliosis-specific manual techniques.	In-class theory and practical demonstration by the instructor and the group
<b>Comprehension</b>	To understand and demonstrate understanding of the taught theoretical and practical course material	Discussion regarding theory and principles through group and individual tasks, recognition of curve patterns, drawing body blocks and therapy diagrams, demonstrating understanding through appropriate application of manual techniques and exercise for an appropriate curve classification.
<b>Evaluation</b>	To evaluate and test the learned theory and principles of ISST Schroth approach	Written exam demonstrating knowledge on scoliosis and basic ISST Schroth theory and principles

**3.1.2 Part II Goals and Description**

Part II gives a deep inside in the educational process of the ISST- Schroth method. The theoretical aspects revised and refined; additional classifications like King, Lenke, and Rigo discussed; the main principles of bracing presented.



Part II completes the standardized therapeutic process from physical examination to the individual therapy plan consisting of exercises, postural teaching, and more specific auxiliary manual techniques. The typical exercises used with more functional and challenging variations to adapt the therapy program to the developing exercise capacity of the patients.

The relationship between scoliosis and Laterolisthesis will be introduced. At this moment the therapist learns more regarding scoliosis in adult and elderly patients. Scoliosis and pain is the central aspect of this group of patients, and both entities have to be included, mostly separated, in the therapy program.

In the functional parts, the participants work self-independent supervised by the instructor and have the chance to discuss problems within the therapeutic team.

To understand more about the surgical way of treatment a short overview of the history and the typical techniques would be given.

### Objectives and Goals for Part II ISST Schroth Training

	Objective	Outcome examples
<b>Knowledge</b>	To define, learn, and practice the material on advanced aspects of scoliosis, such as degenerative scoliosis and olisthesis, more detailed clinical and radiological assessment (pelvic parameters) as well as more advanced exercises in sitting, kneeling, standing and walking as well as more specific scoliosis-specific manual techniques; to learn about other classification systems and surgical approaches; to learn exercise in brace	In-class theory and practical demonstration by the instructor and the group
<b>Comprehension</b>	To understand and demonstrate understanding of the taught theoretical and practical course material	Discussion regarding theory and principles through group and individual tasks, recognition of curve patterns, drawing therapy diagrams, demonstrating understanding through appropriate application of manual techniques and exercises.
<b>Application</b>	To apply the ISST knowledge and principles through examples	Practical demonstration of the principles and methods through an appropriate application of manual techniques and basic and more advanced exercises for a given curve classification and/or population (work in groups and with actual patients).
<b>Analysis</b>	To analyze and distinguish different therapy needs for different patient populations and/or different curve patterns/classifications	Theoretical discussion and practical application with a partner (switching roles: patient/therapist) and through analyzing case studies (pre-requisites for taking Part II)
<b>Synthesis</b>	To asses, plan and design treatment using ISST Schroth methods and principles	Clinical and radiological assessment and developing an appropriate plan for treatment for a given patient
<b>Evaluation</b>	To evaluate and test the learned theory and principles of ISST Schroth approach	Practical exam



### 3.2 Ethics, certification process, and privacy

The certification authorizes for the treatment according to the concept of Katharina Schroth **but does not permit to teach other professionals the method.** In case of non-compliance, the certification and the status ISST Schroth therapist will be deprived by ISST – International and the Asklepios company.

Qualified participants have to pass a written and practical exam to get the ISST certification and become a listed ISST-Schroth therapist according to Asklepios Katharina Schroth.

The written exam is conducted at the end of Part I. In case of failure a course participant has to repeat the exam at the first day of Part II.

The practical exam is conducted at the end of Part II.

In the ten-day combo course, the written exam takes place on the eighth or ninth day. In case of failure, the re-exam is on the ninth or tenth day before the practical exam.

In case of failure the second written exam the participant could not take the practical exam and get only a letter of attendance.

In case of failure the practical exam the participant has to be re-examined at another ISST- Basic course Part II. For this reason, he/she has to apply especially for the practical exam which always starts with the preparation on the day before the exam.

Audio and video recording during the course presentations and practical demonstrations is due to the privacy and the possible misuse of the data not allowed. Photos are allowed if the instructor gives explicit permission.

Continuous Education Credits (CEC): To keep the certificate valid ISST Schroth therapists have to participate in ISST- Refresher courses within 3yr after the last renewal. The refresher courses were organized either by the regional instructors or the senior instructor. Participants can freely choose refresher courses approved by ISST - International in different regions.

### 3.3 Course fee

The course fee and the general course conditions you will get with the application form.

## 4. ISST - Refresher Course

**ISST Refresher course** is a two-day course: consisting of practical and theoretical topics as well as case reports and held by regional instructor. Prices may occasionally vary depending on the number of participants and the local conditions.

Janine Kerstholt will organize and teaches the “ISST-Refresher Courses” in the Netherlands according the request from certified Netherland Schroth therapists.



## 5. Website and List of ISST - Schroth therapists and instructors

All information regarding the courses, training, and dates will be published on the ISST website <https://www.scoliosis-rehabilitation.com/>.

The website provides a list of ISST - Schroth therapists and instructors assorted by countries.

After obtaining the ISST-Schroth certification, participant will be listed on the international list of Schroth therapists on the ISST – website <https://www.scoliosis-rehabilitation.com/>, with his/her name, working-address (country, town), email, and optionally with a picture and the phone number.

In case you don't want your name published in the Schroth-Therapist list please inform the ISST-Instructor at the beginning of the course.