

*About Our Services*

# The Scoliosis Clinic at Spinal Dynamics of Wisconsin

An overview of scoliosis and our use  
of the Schroth method - a physical therapy  
approach used successfully  
across Europe for thousands of patients each year



**Spinal Dynamics**  
of Wisconsin sc

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## **Introduction**

Our mission at Spinal Dynamics is to help adults and children live optimally with scoliosis by being a source of motivation and education for patients and families. Our scoliosis therapy approach is based primarily on the Schroth method, which focuses on early intervention with the use of exercise specific to curve patterns. The method can be used alone for mild curves, and in conjunction with bracing for adolescents with more moderate to severe curves.

At Spinal Dynamics of Wisconsin, we have three certified Schroth physical therapists. We have been trained and mentored by a world leader in conservative management of scoliosis, Dr. Manuel Rigo, of Barcelona, Spain. In 2004, our clinic became one of the first US centers to offer Schroth therapy. Since then, more than 250 scoliosis patients have received services at our center from Southeastern Wisconsin and across the nation. We are encouraged by our early outcomes and are devoted to continuing the mission of Schroth in the US.

## **Summary of Schroth Method**

Therapy is based on the principle that scoliosis has a postural component that can be improved by altering the forces that act on the spine. The belief is that children and adults are capable of understanding their scoliosis and are willing to become educated and play a proactive role in their own health. Curve-specific exercises are taught using principles of physics, anatomy, physiology, and kinesiology. Exercises are repetitively practiced in multiple positions to challenge the body's strengths and weakness. When practicing corrective exercises, optimal postures, and proper mechanics, the body can adapt to a new and better position.

## **Goals of Schroth Therapy**

Although prevention of curve progression is the primary goal of physical therapy, additional goals are also important to quality of life for patients with scoliosis:

- improve posture and body mechanics
- reduce pain (if present)
- improve breathing capacity
- improve strength and flexibility
- optimize cosmetic appearance
- prevent (or delay) surgery
- enhance psychological outlook

## **History of Schroth**

The Schroth method was developed in Germany during 1920's by Katherina Schroth. Katherina was diagnosed with scoliosis as an adolescent and was told that she would need surgery. In order to avoid surgery, she diligently preformed self-made exercises to counteract the affects of scoliosis on her spine. The techniques have been perfected over decades with the help of her daughter, Christa Lehnert-Schroth, a physical therapist, and her grandson, Dr. Hans Rudolph Weiss, an orthopedic surgeon. The Schroth method has now been practiced in Europe almost 90 years. Christa Lehnert-Schroth is author of a book titled, **THREE-DIMENSIONAL TREATMENT FOR SCOLIOSIS: A** Physiotherapeutic Method for Deformities of the Spine. Learn more about this book at: [www.schrothmethod.com](http://www.schrothmethod.com).

### **... in Germany**

The Schroth Clinic in Bad Sobernheim, Germany (See [www.skoliose.com](http://www.skoliose.com)) offers a "Scoliosis Inpatient Rehabilitation" program (SIR). This involves a four- to six-week inpatient stay at the dormitory-based Schroth center. Patients learn and practice Schroth in groups and receive related services for four to six hours a day. Patients then follow up with one of the many Schroth therapists located throughout Europe. Dr. Weiss is respected worldwide, and has published many articles on the conservative management of scoliosis.

### **... in Spain**

More than 20 years ago, physical therapist Elena Salva founded the first Schroth clinic in Barcelona, Spain: Instituto E. Salva Rehabilitation. Elena Salva had worked and trained with Christa Lehnert-Schroth and was motivated to start the Schroth method in her home country. Here, treatment is done on an outpatient basis, with patients being trained on both a 1:1 basis and in groups. Today, the clinic is operated by Dr. Gloria E Salva, daughter of Elena, and her husband, Dr. Manuel Rigo, medical director. The family missions of Schroth and Salva span decades, and are inspiring testimony to the importance of the work.

### **... in the US**

After teaching the first US introductory Schroth course in 2004, Dr. Manuel Rigo has returned to teach in the US three times, including teaching the first US certification course in 2005. Although Schroth awareness is growing in the US, fewer than 10 clinics offer this approach. At Spinal Dynamics we are committed to increasing awareness and utilization of the Schroth methods, as we passionately believe in the benefits it offers to scoliosis patients. A list of Schroth physical therapists in the US is located here:

[Schroth Certified Physical Therapists in the U.S.](#)

## History of Scoliosis Treatment in the US

Adolescent Idiopathic Scoliosis (AIS) affects 2-3% of the population, or an estimated 6 million people in the US. Each year scoliosis patients make more than 600,000 visits to private physician offices, and an estimated 30,000 children are put into a brace for scoliosis, while 38,000 patients undergo spinal fusion surgery.

Physical therapy has not traditionally been used for in the US for the treatment of AIS. The typical approach has been observation, bracing, and surgery:

*Observation:* For curves less than 20 degrees, patients are checked every 3-6 months until the child is done growing.

*Bracing:* Curves greater than 25 degrees are recommended for bracing until the child is done growing.

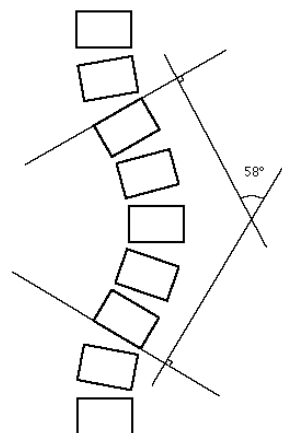
*Surgery:* Curves above 45 degrees are often recommended for surgery.

Unfortunately, due to lack of research in the US, there has been a bias against physical therapy for scoliosis. However, this bias should be challenged, because although there is no conclusive US research proving physical therapy, there is also no research clearly disproving physical therapy. (See reference book "Scoliosis and the Human Spine" by Martha Hawes available at <http://www.scoliosis.org/store/books.php>.) In addition, very promising European research supports scoliosis rehabilitation. (See [www.scoliosisjournal.com](http://www.scoliosisjournal.com) and [www.SOSORT.org](http://www.SOSORT.org).)

At Spinal Dynamics of Wisconsin, we believe that growing research supports Schroth physical therapy as an option for scoliosis. We are inspired by our own early results, and we passionately advocate an active exercise-based approach as an adjunct to observation and bracing, with the goal of preventing progression and avoiding surgery.

## What is Scoliosis?

The basic definition is a side to side curvature of greater than ten degrees as measured by the Cobb angle. The Cobb angle is a lateral measurement between the upper and lower most vertebrae of the scoliosis curve.



**Cobb Angle Measurement**

There are many theories about the cause of scoliosis, but as of yet, none have been exactly defined. Therefore, the term “idiopathic” is a term used to describe most types of scoliosis. Idiopathic means “no known cause.” Idiopathic scoliosis can be broken down into age groups, based upon onset of curvature:

- Infantile: Age 0-4
- Juvenile: Age 4-10
- Adolescent: Age 10-18\*
- Adults: over age 18

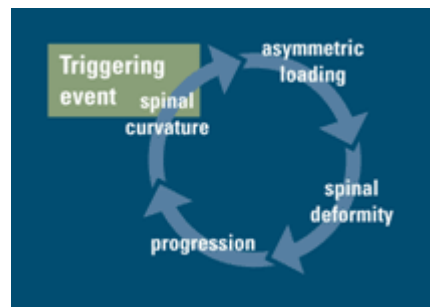
\*Adolescent Idiopathic Scoliosis (AIS) is the most prevalent scoliosis, and is the type most often treated using Schroth physical therapy. Patients with AIS can be treated while still adolescents or as adults.

### **A Note on Scheuermann’s Kyphosis**

Scheuermann’s Kyphosis is a type of spinal curvature deformity found in the thoracic spine (mid back). The natural shape of the thoracic spine is “kyphosis” shaped – or curved forward – usually between 20 and 40 degrees. If this rounded curve is more than 45 degrees, it is considered abnormal kyphosis, and termed “Scheuermann’s Kyphosis.” This curvature is evaluated and treated in similar ways to scoliosis. Therefore, the following information regarding scoliosis patients also applies to Scheuermann’s patients.

### **Which Spinal Curves Will Get Worse?**

Conservative therapy for scoliosis is directed at interrupting the "vicious cycle" that acts upon the spine. There is no exact way to predict which curve will worsen, and which will not. Growth is the number one variable that influences progression of curves: The more growth potential, the more curve progression is likely. The general rule is the greater the curve and the younger the patient at diagnosis (in age and skeletal maturity), the higher the chances the curve will progress. (Note: almost all infantile and juvenile scoliosis curves will progress, and therefore require more aggressive treatment beyond physical therapy.)



**The Vicious Cycle Theory**

### **Who is a Candidate for Therapy?**

In 2006, SOSORT published recommended admission criteria for rehabilitation. SOSORT is The Society on Scoliosis Orthopedic and Rehabilitation Treatment, - a multidisciplinary international society committed to research and practice of non-surgical scoliosis care. See [www.SOSORT.org](http://www.SOSORT.org). Spinal Dynamics actively supports SOSORT through membership and annual conference attendance.

SOSORT criteria for therapy include:

- Curves 20-25 degrees of Cobb angle
- Girls age 12, boys age 13
- Risser sign under 4

According to SOSORT, the above criteria are only guidelines, and considerations for therapy admission should be made on individual cases. There have been discussions suggesting earlier admission for smaller curves when there are clear signs of structural vertebral deformity (as seen on x-ray), and when there is a strong family history of progressive scoliosis. In these cases, it may be appropriate to begin treatment for younger patients with curves at 10-15 degrees in order to prevent progression.

For additional information, see *Indications for conservative management of scoliosis (guidelines)* at published in SOSORT's Journal:  
<http://scoliosisjournal.com/content/1/1/5>

## **Scoliosis Clinic at Spinal Dynamics of Wisconsin**

Spinal Dynamics of Wisconsin has developed our scoliosis program to meet the varying needs of US patients while honoring the key elements of the European Schroth method.

After initial evaluation, we will make patient-specific recommendations while still being flexible to accommodate individual patient preferences, whether you are an adolescent, adult, or out-of-town patient.

### **Step One: Evaluation**

Prior to initiation of therapy, patients undergo a thorough evaluation consisting of:

- orthopedic examination
- posture exam with digital photos
- breathing assessment
- x-ray review
- curve classification
- discussion of individual findings

The purpose of the evaluation is to gain the clinical information necessary for the patient, family and therapist to jointly determine the patient appropriateness for physical therapy, and to set individual therapy plans and goals. Patients and families will have time to ask questions specific to their individual cases.

### **Option: Pre-Evaluation Consultation**

We understand that people may have uncertainties associated with their condition and would like time to simply meet with a therapist to ask questions without undergoing a formal evaluation. For these cases, we offer the option of consultation appointments on a private-pay basis. A physician referral is not required, but we ask you to bring your most recent x-ray films or digital images, if these are available. A consultation includes a brief exam, but ample time is provided to address individual questions and concerns.

## **Step Two: Schroth Orientation**

Our two-hour orientation class teaches patients and families about scoliosis, and outlines Schroth principles and exercises. Orientation is required for all adolescent and most adult patients who have been evaluated and have decided to begin Schroth therapy. Ideally, patients will attend orientation prior to (or within the first one to two weeks of) exercise instruction.

The knowledge gained at orientation serves as a critical foundation for patients to be more successful in learning Schroth exercise technique. Orientations are held on Saturday mornings.

### **Option: Pre-Admission Orientation**

Orientation classes are open to people who are not yet patients but are interested in learning more about Schroth prior to registering for evaluation or treatment. Please contact the clinic to schedule.

## **Step Three: Treatment and Exercise Instruction**

Following evaluation and orientation, each patient is scheduled based upon his or her individual treatment plan. Plans will range in content and progression according to individual findings. Some patients may require more hands-on therapy treatment as an adjunct to exercise, while others will be ready to begin exercise immediately. We tailor programs to meet individual needs to foster the most successful overall therapy experience. (See: ***Adolescent Treatment***, ***Adult Treatment***, and ***Out-of-Town Patients***)

## **Step Four: Follow-Up**

Once trained in Schroth, patients continue exercises at home for 20 to 30 minutes per day, five days per week. The critical period for exercise consistency is through the growing years, but the exercises are designed for life-long use in order to maintain curve stability well into adulthood. Follow up therapy appointments will vary by individual patients. (See ***Advanced Program***)

## Key Differences in Adolescents and Adults

There are some key differences in treatment for adults and adolescents:

**Adolescents:** Due to continued skeletal growth, adolescents are at higher risk for progression so instruction and follow up is more intense and frequent until they reach full skeletal maturity

**Adults:** Adults more often have pain and restrictions in flexibility, so treatment is implemented more slowly in order for the body to adapt. In addition, adults are not at a high risk for rapid progression, so there is typically less urgency to proceed aggressively.

## Adolescent Treatment

Adolescent patients who live in the Milwaukee area typically scheduled for our **Intensive Program**. The program is spread out over a three- to five-month period, and is very accommodating to busy family schedules. Local families may also consider our **Immersion Program**, a two-week compressed training option if this option is more convenient to their schedules.

### Intensive Program

We understand that it parents and kids are busy, and that daily schedules are often tight, so we have put together an instruction schedule to help patients plan ahead. The Intensive Program is designed to maximize learning and carry over during the critical phase of adolescent growth. We find that although schedules will vary with varying learning abilities, most of our adolescent patients succeed in training on this schedule:

- Phase 1 (P1) - Month one
  - Individualized one-hour training sessions; 2x/week
- Phase 2 (P2) - Months two to three
  - Individualized one-hour training 1x/week, and one-hour group exercise class 1x/week
- Phase 3 (P3) - Months three to four
  - One-hour group exercise class; 1-2x/week
- Phase 4 (P4) - Months four to five
  - 2-4 x/month group exercise with individual sessions as needed

Adolescent patients will be scheduled for a full therapy re-evaluation every four to eight weeks until the training program is complete. Adolescents then enter the **Advanced Program**.

For information about scheduling an adolescent for the **Intensive Program**, see **Scheduling and Registration**.

## **Adult Treatment**

Scoliosis treatment using Schroth principles is not limited to children. Adults who were diagnosed with scoliosis as adolescents can also benefit from learning Schroth. However, many adults have non-idiopathic scoliosis, such as degenerative scoliosis or neurologically-induced curves as in Parkinson. These non-idiopathic curves are biomechanically different than Adolescent Idiopathic Scoliosis, and the approach to therapy typically involves more than Schroth exercises. In some cases, Schroth is not appropriate. It is very important for adults to have an accurate curvature diagnosis before proceeding with treatment.

All adults are welcome to have a consultation or evaluation with one of our Schroth therapists. From there, we will be able to understand more fully what is needed for coordination of care - including physician communication, referral recommendations, and discussion of diagnostics. We have very good working relationships with Milwaukee-area physicians and will be happy to help you.

Adults may or may not have pain associated with their scoliosis. If pain-reduction is a goal in entering therapy, we will carefully evaluate and address the many possible mechanical causes of pain. We will treat specific deficits found in muscle and joint mechanics as part of the overall program. Adjunctive therapies for adults often include:

- Modalities for pain, such as ultrasound and electrical stimulation
- Soft tissue mobilization and massage
- Joint mobilization techniques
- Non-Schroth exercises to address strength and flexibility deficits

When applying Schroth principles in adults, we take a slower and more individualized approach than with adolescents. Given the multiple variables unique to adult scoliosis, program frequency and content can vary greatly patient to patient. Training schedules for adults will be done on an individual basis after evaluation is completed. Once trained, adults are eligible to attend our weekly adult group exercise classes as a way to stay motivated with their program.

For information about scheduling an adult, see ***Scheduling and Registration***.

## **Out-of-Town Patients**

Out-of-town patients are trained in our ***Immersion Program***. This program is directed at achieving the same therapeutic goals as our ***Intensive Program***, but on a compressed schedule over two weeks.

### **Immersion Program**

This program most closely resembles programs offered at Schroth clinics in Germany and Spain, as it emphasizes learning exercises through “immersion” over a short period of time. It incorporates the very important element of learning in groups, which offers immense benefits socially, psychologically, and educationally. Group training also makes the program more affordable over 1:1 training. Patients can expect to be independent in their exercises when they return home from the program.

*Immersion programs for out-of-town adolescents* are typically held over the summer months, and scheduled for groups of three to six adolescents. Depending on individual needs, we may be able to offer 1:1 Immersion Training Programs at alternative times in the year. Adolescents train two to three hours in both the mornings and afternoons, with a day or two off during program. After immersion training, we encourage our out-of-town patients to come back for one or two follow-up visits each year for re-evaluation and advancement, at least until the patient reaches skeletal maturity.

*Immersion training for out-of-town adults* is scheduled on an individual basis.

### **A Note to Milwaukee-Area Patients**

***Immersion Program*** training is also available to local patients who prefer the two-week training schedule over the three- to five-month ***Intensive Program***. Once trained, local patients enter the ***Advanced Program*** and may attend our local group exercise classes.

### **Scheduling for the Immersion Program**

We understand it is a big commitment to travel to our clinic for two weeks. Therefore, we have established a thorough pre-registration process to help determine how well the program will fit the patient’s needs. Our scoliosis schedule coordinator will help to direct you through the process and answer your questions. We will also recommend area hotels and recreation to make your stay enjoyable. See ***Scheduling and Registration***

## **Advanced Program**

Once trained (through our *Intensive* or *Immersion Program*), adolescents progress to the *Advanced Program*. The key goals at this phase are to keep the patient motivated and provide feedback on exercise technique until the adolescent is six to twelve months past skeletal maturity. Visit frequency is determined based upon individual needs, and decided jointly between the patient, the family, and the therapist. In general, we recommend the following schedule:

- *Monthly*: physical therapy exercise sessions 1:1 or in group
- *Quarterly*: Full physical therapy re-evaluation
- *Annually*: Participation in the annual “Spinal Dynamics Scoliosis Boot Camp.” This is fun summer camp where advanced patients train together at our center for two to three hours on three separate days. This is great for motivation, encouragement, and exercise progression.

### **A Note About Skeletal Maturity and Growth Spurts**

For younger patients who enter Schroth training far before their adolescent growth spurt, we may recommend a modified training schedule in order to better pace the Intensive Training Program. These patients may then require more regular visits during their Advanced Program in order to maximize the exercise potential when they hit their growth spurt. For older adolescent patients who enter Schroth training near or at the end of growth spurt, the Advanced Program follow up schedule will be more flexible, as they are entering adult category of treatment.

## **Groups**

We offer Schroth exercise groups year-round, divided into two groups:

- 1) adolescent/young adult group (under age 18-20)
- 2) adult group (over age 18-20)

All trained patients are welcome. Groups are limited to six participants, so please call ahead to schedule.

## **Scheduling and Registration**

To schedule an evaluation or consultation, please contact our scoliosis schedule coordinator, Heather Erdman at 414-302-0770.

### **Local patients**

We ask that you bring your most recent x-rays to your initial visit. We prefer original films, but you can also bring dated copies, bring digital images on disc or e-mail digital images ahead of time. If you do not have x-rays, or your x-rays are from more than a year ago, we can help make arrangements for you to get new x-rays. (See ***Radiology Resources***.)

### **Out-of-town patients**

We ask that you complete several pre-admission forms prior to scheduling. Please contact us to request these forms. We will review your clinical information and contact you to discuss how we can optimally plan for your care prior to your travel. We will then mail you a confirmation prior to your visit, either electronically or in the mail.

For out-of-town patients, we prefer the opportunity to review x-rays at least one week prior to your arrival. You can mail original or duplicate x-ray films, e-mail digital images to [herdman@sdwpt.com](mailto:herdman@sdwpt.com) or mail us the disc with digital images. If you mail copies of x-rays, be sure the films are dated.

For the convenience of our out-of-town patients, we have arrangements with two nearby hotels. Please let them know you are with Spinal Dynamics for discounted rates:

- *Radisson Hotel Milwaukee West*

[http://www.radisson.com/milwaukee\\_west](http://www.radisson.com/milwaukee_west)

Tracy Renner, Sales Manager

\$149.00/night (Normal rate is \$189.00)

Hotel is directly across the street from our clinic

- *Holiday Inn Express Milwaukee West Medical Center*

<http://www.hiexpress.com/mke-medctr>

Lisa Linz, General Manager.

\$79.00 for a standard room

The hotel is about ½ mile from the clinic – easy walking

You will have free time for fun while you are here as well. City information on Milwaukee can be found at [www.visitmilwaukee.org](http://www.visitmilwaukee.org). We also have area maps and information at our clinic for you. Chicago is an-hour-and-a-half drive, so you can consider that as a day-trip option as well.

## **Billing and Payment Options**

### **Local Patients (Non-Immersion Program)**

Billing for scoliosis treatment is typically like billing for any other physical therapy services. Patients have the option of billing insurance or paying privately. Referral requirements vary by insurance plan. Private pay patients do not require a physician referral. If you know we are out-of-network with your insurance, you may be eligible for benefits under a process called “out of network gap exception.” In this process, insurances may grant in-network level benefits based upon our Schroth scoliosis specialty. Contact our scoliosis schedule coordinator at [herdman@sdwpt.com](mailto:herdman@sdwpt.com) for information on how you can apply for these benefits with your insurance company. Please visit these pages at our Web site for more information about referrals and insurance

<http://www.sdwpt.com/patient-resources/referral-info.php>

<http://www.sdwpt.com/patient-resources/insurance-info.php>

### **Out-of-Town Patients (Immersion Program)**

Billing insurance for out of town Immersion Program patients can be complicated by many variables. Often, non-emergency services aren't covered outside a geographic area. Many times insurances do not allow for the billing of more than one hour of therapy per day. In addition, many out-of-town insurance plans consider us out-of-network, making deductibles very high for patients. Because of these variables, we have chosen to make the Immersion Program a private-pay program. This allows us to substantially discount our normal rates and make the program more affordable overall. For complete pricing information on the Immersion Program, please contact our scoliosis schedule coordinator at [herdman@sdwpt.com](mailto:herdman@sdwpt.com)

Following payment at the completion of the two-week program, we will provide you with detailed coding and documentation. This will allow you to submit your expenses to your flexible spending account, your health savings account, or perhaps seek reimbursement from your insurance company.

## **Patient References**

We encourage you to contact families and patients who have had Schroth treatment here at Spinal Dynamics. Names and phone numbers are available from Heather at [herdman@sdwpt.com](mailto:herdman@sdwpt.com). You may also read testimonials from several of our scoliosis patients at <http://www.sdwpt.com/successes.php>

## **Bracing**

In some cases, patients can do better by combining with physical therapy and bracing together rather than pursuing bracing alone as a treatment.

### **Bracing Indications**

The goal of bracing is to help stop curvatures from progressing in adolescents during skeletal growth. Braces are usually prescribed for moderate to severe curves in children who have not yet reached skeletal maturity. Bracing does not take the place of therapy, but bracing and therapy are meant to work in harmony to minimize curve progression.

*Skeletal maturity* is measured using a 0-5 Risser scale from x-rays: Risser 0 = skeletally immature; Risser 5 = full skeletal maturity. Braces are less likely to be prescribed for children at Risser 4 or above, as the risk of curve progression is less when less spinal growth remains.

*Curve Severity:* Bracing is usually prescribed for scoliosis curves greater than 25 degrees, and for Scheuermann's kyphosis curves greater than 50-55 degrees.

### **Bracing Resources at Spinal Dynamics**

#### *Existing Braces:*

Many of our patients are already wearing braces when they begin physical therapy and may not need our bracing services. This is fine. In these cases, our orthotists can simply be available for consultation on any bracing questions you may have. If you have bracing concerns or are dissatisfied with your existing brace, we can try to assist you in problem-solving.

#### *New Braces:*

If you are in need of a brace for the first time, or have outgrown a brace and are ready for a new one, you may choose to have one of our orthotists fit your new brace. Both of our certified orthotists have extensive experience in scoliosis bracing and have traveled to Europe and trained directly with Dr. Manuel Rigo on Rigo-System Cheneau braces (RSC braces). We highly recommend these braces, as they use three-dimensional correction principles that best match the Schroth therapy method. There are many articles describing the benefits of RSC bracing. We are happy to assist you in obtaining a referral from your physician for a referral for Rigo System Cheneau brace.

Our preferred orthotists are

*Luke Stikeleather, CPO:*

Luke is a 21 year veteran orthotist who has been making custom RSC braces since 2004. He is the owner of Orthotic Solutions in Fairfax, VA. Over the past two years, Luke has traveled quarterly to consult with our patients at Spinal Dynamics, and many of our patients have traveled to his clinic for get their RSC brace.

*Patrick Flanagan, CPO:*

Patrick is a veteran orthotist with experience making custom RSC braces for many years. He is in private practice in McHenry Illinois. Patrick has fit many of our local patients at his clinic and is available for patient consultations regularly at Spinal Dynamics.

*Bracing Without Therapy*

Our orthotists are available to make your scoliosis brace without your enrollment in physical therapy. You may contact either orthotist directly to make fitting arrangements.

### **Radiology Resources**

If you need x-rays, we are happy to work with you and your physician to help facilitate necessary x-rays to begin physical therapy. One of our preferred local radiology imaging providers is Pediatric Diagnostic Imaging.

See [www.pdi-imaging.com](http://www.pdi-imaging.com)

### **Physician Resources**

We have earned the respect of many specialty physicians in the community who work with scoliosis: pediatricians, pediatric orthopedic surgeons, spine surgeons, and pain management specialists. If you need a physician for consultation, diagnosis, or treatment, we are happy to help direct you.

## **Links**

Scoliosis: An online journal

[www.scoliosisjournal.com](http://www.scoliosisjournal.com)

Society on Scoliosis Orthopedic and Rehabilitation Treatment (SOSORT)

[www.sosort.net](http://www.sosort.net)

The Katharina Schroth Spinal Deformities Rehabilitation Center

[www.skoliose.com](http://www.skoliose.com)

National Scoliosis Foundation

[www.scoliosis.org](http://www.scoliosis.org)

American Physical Therapy Association

[http://www.apta.org/AM/Images/APTA\\_IMAGES/ContentImages/ptandbody/scoliosis/Scoliosis.pdf](http://www.apta.org/AM/Images/APTA_IMAGES/ContentImages/ptandbody/scoliosis/Scoliosis.pdf)