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[Article 4 \(SOSORT STATUTES\) :](#)

The SOSORT is a non profit organization.

The general aims of the Society are:

First, to foster the best conservative management – early detection, prevention, care, education and information - of scoliosis and other spinal deformities.

Second, to encourage multidisciplinary team work, including scientists, medical and healthcare professionals, patients and their families.

The specific aims of the Society are:

4.1 To offer an open forum for the exchange of knowledge and ideas in the field of conservative management of all spinal deformities, and more particularly scoliosis.

4.2 To stimulate research and clinical studies supporting the main idea that prevention and conservative treatment are effective, efficient and valuable tools for the management of all the signs and symptoms of scoliosis and other spinal deformities.

4.3 To stimulate consensus in all the different conservative actions directed to the early detection, observation, prevention, management and orthopaedic treatment and rehabilitation of scoliosis and other spinal deformities.

4.4 To spread the idea into the scientific community, as well as in the general population, patients and their families that prevention based on education and early conservative management and avoiding under- as well as over-treatment, is the best approach in this field, in addition to following generally accepted guidelines.

4.5 To promote specific education and training among professionals in order to create a body of specialists in this particular area, who are able to care efficiently for scoliosis patients.

If you would like to join SOSORT please contact secretary@isico.it

[EDITORIAL:](#)

Dear members,

Time goes by and we do not want to lose the opportunity to thank our President **Dr. Theodoros B. Grivas**, and **Dr. Jean Claude de Mauroy**, for their great collaboration in the first SOSORT Newsletter. They showed us what the 5th SOSORT MEETING represented for the community and what the 6th SOSORT MEETING will be focused on. This represents

our present and our immediate future.

We want also to thank all the committees' chairmen for helping us with all the information related with their work.

The team of the Newsletter Committee tried to select the most interesting papers published in pubmed concerning our field: deformities of the spine. We also reviewed the more viewed papers in *Scoliosis Journal*. These will be a topic in each edition.

Our idea with the editorials is to offer you a glimpse into the happenings of our Society and into the thoughts and knowledge of those experts that can help us to enrich our profession for the wellbeing of our patients.

After our premiere publication we decided to tell you about our history. We thought that the person that could do this best would be **Dr. Manuel Rigo**, past president of the SOSORT, who made the first step in organizing the first meeting.

Since we also wanted to present an exciting (suggest: a prospective on clinical treatment) editorial, another name that came to mind was **Dr. George H. Thompson**, past president of the SRS, who provides us with new information about the future of scoliosis management .(spero fosse questo il significato!)

We are glad to offer you the second edition of the SOSORT NEWSLETTER.

The Members of the Newsletter Committee.
Villagrasa M, Zaina F, Pizzetti P

EDITORIAL: A BRIEF RESUME OF THE SOSORT HISTORY

Manuel Rigo, MD
Past President, SOSORT

The International Society for Scoliosis Orthopaedic and Rehabilitation Treatment was born officially in Poznan, Poland (April 2006). Later, Boston 2007 and Athens 2008 were very successful meetings. This is probably the first time that an international body of specialists in conservative management of spinal deformities meets regularly with a clear purpose: to increase the evidence that rehabilitation and orthopaedic treatment are effective, and to provide efficient intervention. Our hope is that in few years the patients will be able to find more alternatives for treatment with high quality.

In January 2004 we had our first meeting, which was organized in a very short time. Our first idea was to organize an informal meeting with some old friends from the SIRER (Société Internationale de Recherche et d'Etude sur le Rachis) who also used to present papers on this topic in the IRSSD meetings. The aim of this meeting was to discuss our different approaches and to improve the standards of treatment. We were expecting a small meeting with only 20 or 30 colleagues, however we were pleasantly surprised when we reached a quota of almost 100 members, coming from many different countries and also using different strategies. We decided to meet again a year later in Milan at Stefano Negrini's place. Here, we decided to start a society on conservative management.

Now that the easiest part has been done, we have to look forward and continue the effort. From my experience, this will be the most difficult part. Hanging on my office wall there is a quote sent by some good American friends which says: "Never doubt that a small group of thoughtful, committed individuals can change the world; indeed, it's the only thing that ever has (Mead)".

EDITORIAL: FUTURE OF SCOLIOSIS TREATMENT

George H. Thompson, MD
Past President, Scoliosis Research Society

The treatment of idiopathic scoliosis, particularly conservative treatment, has been controversial. It has been difficult to determine which patients were going to progress, and who would benefit from conservative treatment (physical therapy, bracing, etc.) or require surgery. Genetic testing will soon be available, that will help answer some of the questions. An analysis of 51 DNA markers associated with scoliosis has allowed determination of three specific groups of patients: no risk for progression, moderate risk, and those that will progress to 45 degrees or more and probably require surgery. When this testing is available, it may change the entire paradigm of management of scoliosis. Those that will not require treatment will need to be followed only periodically for confirmation. Those that are in-between will still require periodic evaluation and may benefit by conservative methods of treatment, such as physical therapy and bracing. Those in the high risk category for curve progression, may have earlier surgical intervention involving fusionless techniques. This will make the application of growth modulation techniques, such as, vertebral body stapling, more applicable. This may be effective in controlling curve progression until skeletal maturity, at which time the staples could be removed or perhaps even left in place. As a consequence, spinal mobility will not have been affected but curve progression will have been prevented. Further refinement of genetic testing may ultimately identify those patients who will benefit by physical therapy or bracing, so that these treatments can be begun at the earliest possible stage to maximize their effectiveness.

This is an exciting time as the future of idiopathic scoliosis is changing. Genetic testing will be one of the major advancements in the past 50 years. This type of testing should be commercially available within the next several years. It will result in further opportunities for cooperative relationships between the Scoliosis Research Society (SRS) and SOSORT. New criteria for management will be developed and will also be given an opportunity for more scientific assessment of the results of the various forms of treatment.

NEWS:

Board News:

Dr Theodoros Grivas is the new **chief editor of "Scoliosis"**, the official journal our society. He started working, together with the editorial board, to improve the rating of the journal, which has already a theoretical impact factor of 1.59, This is very good after such a short period since its inauguration. The next steps are to reach an official impact factor, and to make the rapidly increase the number of papers published. To do this we need the cooperation of all SOSORT members, who are kindly invited to send papers for evaluation, and possibly publication. Moreover, this step is required in order to become an active member.

Dr Stefania Guareschi from Milan is the **new secretary of SOSORT**. She will work on keeping all the members together and involved in the society activities. You can contact

her by email at sosort@isico.it

Committee's News:

Educational Committee:

Chair: Manuel Rigo

This committee is starting its work. The members of this Committee are in a brainstorming stage and elaborating the first report which will be sent to the board.

The actual members of this Committee are: Rigo M (as Chairman), Marti C, Janssen B, Stikeleather L, Herling O, Knott P, Rolfe T and Betts T. If someone wants to be part of this project contact with the chair: lolo_rigo@hotmail.com

Book committee:

Chair: Theodoros B. Grivas

The new topic for the book is going to be defined in the near future, and kyphosis will be the first suggested subject. Once accepted, the Lyon Educational program could be the basis for the next SOSORT ICL book. People interested in participating in the project please contact the chair: grivastb@vodafone.net.gr

Membership committee:

Chair: Fabio Zaina

The work of this committee is going on by finding people possibly interested in SOSORT and inviting them to join us. Some new subscriptions have been made, but we need all members' help to make the society grow.

Clinical Committee:

Chair: Stefano Negrini

No news at present time from this committee. If someone wants to be part of this project please contact the chair: stefano.negrini@isico.it

Scientific, Research & Consensus Committee:

Chairs: Tomasz Kotwicki, Jacek Durmala, Toru Maruyama

No news at present time from this committee. If someone wants to be part of this project please contact one of the chairs: kotwicki@amp.edu.pl, jdurmala@gcm.pl, tmaruyama17@ybb.ne.jp

Newsletter Committee:

Chair: Mònica Villagrasa and Fabio Zaina

Working in the third Newsletter. If someone wants to be part of this project with new ideas and suggestion please contact one of the chairs: monikve78@hotmail.com; fabio.zaina@isico.it

Ethic Committee:

Chair: Tamar Neuhaus

No news at present time from this committee. If someone wants to be part of this project please contact the chair: tamarneu@yahoo.com

Web Site Committee:

Chair: Elias Vasiliadis

In the next days many updates should appear on the SOSORT website. For any suggestions, or if someone wants to be part of this project,+ please contact the chair: eliasvasiliadis@yahoo.gr

SCIENTIFIC EVENTS:

23th-24th April 2009, Leicester, UK: British Scoliosis Society Annual Meeting

6th SOSORT MEETING. LYON, May 20th-23rd, 2009. by Dr. Jean Claude de Mauroy

23rd-26th September 2009, San Antonio, Texas, USA: 44th SRS annual meeting

2010 Edmonton, Canada: IRSSD meeting

REVIEW OF LITERATURE:

SCOLIOSIS JOURNAL:

Research:

[Assessment of the centre of pressure pattern and moments about S2 in scoliotic subjects during normal walking](#) Nachiappan Chockalingam, Surendra Bandi, Aziz Rahmatalla, Peter H Dangerfield, El-Nasri Ahmed
Scoliosis 2008, **3**:10 (12 August 2008)

[Trunk asymmetry in juveniles](#) Theodoros B Grivas, Elias S Vasiliadis, Constantinos Mihos, Georgios Triantafyllopoulos, Angelos Kaspiris
Scoliosis 2008, **3**:13 (23 September 2008)

[Smart garment for trunk posture monitoring: A preliminary study](#) Wai Yin Wong, Man Sang Wong
Scoliosis 2008, **3**:7 (20 May 2008)

Review:

[Rate of complications in scoliosis surgery – a systematic review of the Pub Med literature](#) Hans-Rudolf Weiss, Deborah Goodall
Scoliosis 2008, **3**:9 (5 August 2008)

[Relative shortening and functional tethering of spinal cord in adolescent scoliosis – Result of asynchronous neuro-osseous growth, summary of an electronic focus group debate of the IBSE](#) Winnie CW Chu, Wynniew MW Lam, Bobby KW Ng, Lam Tze-ping, Kwong-man Lee, Xia Guo, Jack CY Cheng, R Geoffrey Burwell, Peter H Dangerfield, Tim Jaspán
Scoliosis 2008, **3**:8 (27 June 2008)

[Surgical treatment of scoliosis: a review of techniques currently applied](#) Toru Maruyama, Katsushi Takeshita
Scoliosis 2008, **3**:6 (18 April 2008)

Top 10:

1. Accesses 21048

[Physical exercises in the treatment of idiopathic scoliosis at risk of brace](#)

treatment – SOSORT consensus paper 2005

Hans-Rudolf Weiss, Stefano Negrini, Martha C Hawes, Manuel Rigo, Tomasz Kotwicki, Theodoros B Grivas, Toru Maruyama, members of the SOSORT

Scoliosis 2006, **1**:6 (11 May 2006)

2. Accesses 12768

A retrospective study of twenty-three adults treated for scoliosis using the Spinecor Orthosis

Gary Deutchman, Marc Lamantia, Joseph Indelacato, Marianna Raykhman

Scoliosis 2007, **2**(Suppl 1):S23 (12 October 2007)

3. Accesses 10555

Adolescent idiopathic scoliosis: natural history and long term treatment effects

Marc A Asher, Douglas C Burton

Scoliosis 2006, **1**:2 (31 March 2006)

4. Accesses 9876

Indications for conservative management of scoliosis (guidelines)

SOSORT guideline committee, Hans-Rudolf Weiss, Stefano Negrini, Manuel Rigo, Tomasz Kotwicki, Martha C Hawes, Theodoros B Grivas, Toru Maruyama, Franz Landauer

Scoliosis 2006, **1**:5 (8 May 2006)

5. Accesses 8820

The transformation of spinal curvature into spinal deformity: pathological processes and implications for treatment

Martha C Hawes, Joseph P O'Brien

Scoliosis 2006, **1**:3 (31 March 2006)

6. Accesses 8460

Biomechanical spinal growth modulation and progressive adolescent scoliosis – a test of the 'vicious cycle' pathogenetic hypothesis: Summary of an electronic focus group debate of the IBSE

Ian AF Stokes, R Geoffrey Burwell, Peter H Dangerfield

Scoliosis 2006, **1**:16 (18 October 2006)

7. Accesses 8363

Painful rib hump: a new clinical sign for detecting intraspinal rib displacement in scoliosis due to neurofibromatosis

Andreas Gkiokas, Socratis Hadzimichalis, Elias Vasiliadis, Marina Katsalouli, Georgios Kannas

Scoliosis 2006, **1**:10 (14 June 2006)

8. Accesses 6948

Rare causes of scoliosis and spine deformity: experience and particular features

Konstantinos C Soultanis, Alexandros H Payatakes, Vasilios T Chouliaras, Georgios C Mandellos, Nikolaos E Pyrovolou, Fani M Pliarchopoulou, Panayotis N Soucacos

Scoliosis 2007, **2**:15 (23 October 2007)

9. Accesses 6612

Correction effects of the ScoliOlogiC® „Chêneau light" brace in patients with scoliosis

Hans-Rudolf Weiss, Mario Werkmann, Carola Stephan

Scoliosis 2007, **2**:2 (26 January 2007)

10. Accesses 6571

Melatonin the "light of night" in human biology and adolescent idiopathic scoliosis

Theodoros B Grivas, Olga D Savvidou
Scoliosis 2007, **2**:6 (4 April 2007)

Medline – Pubmed:

Genetics

[Five new consanguineous families with horizontal gaze palsy and progressive scoliosis and novel ROBO3 mutations.](#)

Abu-Amero KK, Dhalaan HA, Zayed ZA, Hellani A, Bosley TM.

The ROBO3 gene does not appear to have an obvious hot spot area for mutations; therefore, we recommend sequencing all exons and exon-intron boundaries in patients with clinical and/or radiologic features of HGPPS.

[Genetics of scoliosis.](#)

Heary RF, Madhavan K.

Based on family pedigree and genetic studies, the proposed pattern of inheritance for markers of scoliosis are expected to be autosomal dominant, X-linked, multigene, or multifactorial. This is further complicated by locus heterogeneity, allele heterogeneity, and carrier states found in normal individuals. Although none of these modes of inheritance has been definitively proven, it appears that a multifactorial mode of inheritance with variable penetrance is the most likely method.

[Lack of association between the promoter polymorphism of the MTNR1A gene and adolescent idiopathic scoliosis.](#)

Qiu XS, Tang NL, Yeung HY, Cheng JC, Qiu Y.

Promoter polymorphism of the MTNR1A gene was not associated with the occurrence or curve severity of AIS. The MTNR1A gene may not be involved in the etiopathogenesis of AIS.

[Association study of tryptophan hydroxylase 1 and arylalkylamine N-acetyltransferase polymorphisms with adolescent idiopathic scoliosis in Han Chinese.](#)

Wang H, Wu Z, Zhuang Q, Fei Q, Zhang J, Liu Y, Wang Y, Ding Y, Qiu G.

TPH1 polymorphisms were associated with AIS but not with gender and Cobb angle in AIS patients. AANAT polymorphisms were not associated with AIS. These results suggested that TPH1 was an AIS predisposition gene, and there was a close relationship between the dyssynthesis of melatonin and AIS.

Reviews

[Adult degenerative scoliosis: a review.](#)

Birknes JK, White AP, Albert TJ, Shaffrey CI, Harrop JS.

Degenerative scoliosis is a complex disorder. The primary surgical aims are to decompress the neural elements, normalize both sagittal balance and coronal and rotational deformity, fixate to the sacrum/ilium when appropriate, and optimize conditions for osteogenesis and fusion.

[Idiopathic scoliosis.](#)

Angevine PD, Deutsch H.

IS is typically treated with anterior or posterior spinal fusion; treatment of very young patients is complicated by the need to allow growth to continue while controlling the

scoliosis.

[Congenital thoracolumbar spine deformities.](#)

Aliabadi H, Grant G.

Advances in the field of spinal deformity correction now allow us to better treat individuals with these types of deformities. It is important for the practicing neurosurgeon to be knowledgeable of surgical and nonsurgical treatments of patients with congenital thoracolumbar spinal deformities in order to better understand which patients will ultimately progress and necessitate surgical treatment.

[Noninvasive measurement and screening techniques for spinal deformities.](#)

Harrop JS, Birknes J, Shaffrey CI.

The use of a detailed physical examination, serial examinations, and radiographic means serve well to document curve presence and monitor progression.

[Classification systems for adolescent and adult scoliosis.](#)

Smith JS, Shaffrey CI, Kuntz C 4th, Mummaneni PV.

The importance of scoliosis classification schemes lies in their ability to standardize communication among health care providers. With regard to the classification of adolescent scoliosis, the Lenke system has addressed many of the significant limitations of the King system and is now the standard classification scheme. Classification schemes for adult scoliosis have been reported only recently, and each offers specific advantages (the simple pathogenesis-based system of Aebi, the strong clinical relevance of the Schwab system, and the richly descriptive Scoliosis Research Society system). This article highlights the salient features of currently used scoliosis classification systems.

[Bracing for scoliosis.](#)

Heary RF, Bono CM, Kumar S.

By far, the best indication for bracing is treatment of the skeletally immature adolescent patient with an idiopathic flexible curve of less than 45 degrees magnitude.

[Low bone mineral status in adolescent idiopathic scoliosis.](#)

Li XF, Li H, Liu ZD, Dai LY.

The effect of the eccentric tension-compression environments on BMD, the correlation of BMD with scoliosis parameters and the effect of bracing on BMD should be investigated further in prospective, randomized and longitudinal follow-up studies.

[Imaging of painful scoliosis.](#)

Davies A, Saifuddin A.

The aim of this review is to illustrate the causes of a painful scoliosis in children, adolescents and adults.

[The treatment of adolescent idiopathic scoliosis \(AIS\) according to present evidence. A systematic review.](#)

Weiss HR, Goodall D.

Due to the presence of evidence to support conservative treatments, a plan to compose a RCT for conservative treatment options seems unethical. But it is also important to conclude that the evidence for conservative treatments is weak in number and length.

Braces

[The flexible Triac-Brace for conservative treatment of idiopathic scoliosis. An alternative treatment option?](#)

Zeh A, Planert M, Klima S, Hein W, Wohlrab D.

We do not recommend treatment of thoracic or double curves with the Triac-Brace. Larger studies are necessary to assess the effectiveness in lumbar curves. The improved wearing

comfort is a potential advantage.

[Study of the pressures applied by a Chêneau brace for correction of adolescent idiopathic scoliosis.](#)

Pham VM, Houilliez A, Schill A, Carpentier A, Herbaux B, Thevenon A.

Even though the TekScan system does not provide direct information on the correction of spinal curvature, it appears to be a useful tool in the treatment of scoliotic patients. Strap adjustment clearly influences the applied pressures - particularly those on the rib cage. During activity, there is a natural tendency to decrease the pressure; this justifies efforts to maintain strap tensions in general and during day wear in particular.

[The effect of time on qualitative compliance in brace treatment for AIS.](#)

Mak I, Lou E, Raso JV, Hill DL, Parent E, Mahood JK, Moreau MJ, Hedden D.

In daytime wear, a significant decrease in force over time was found. Most of the decrease occurred within hours 1 and 2 of brace wear. There was no significant decrease during night wear. There were no significant correlations between force decline and outcome.

[Efficacy of a new computer-aided design/computer-aided manufacture orthosis in the treatment of adolescent idiopathic scoliosis.](#)

Kessler JI.

This preliminary study suggests that the new Los Angeles brace is effective in the treatment of scoliosis in girls, while avoiding some obstacles involved in traditional bracing.

[Effects of short-term brace wearing on the pendulum-like mechanism of walking in healthy subjects.](#)

Mahaudens P, Banse X, Detrembleur C.

Our results showed a decrease in pelvis and shoulder motion, an increase in external work, and an alteration in pendulum-like mechanism of walking when wearing the brace. However, no significant difference was observed in total mechanical work, electromyographic activity and energy cost. The loss of efficiency of this pendulum mechanism could be due to the reduction of pelvis and shoulder motion brought about by the brace.

[Bracing has no effect on standing balance in females with adolescent idiopathic scoliosis.](#)

Sadeghi H, Allard P, Barbier F, Gatto L, Chavet P, Rivard CH, Hinse S, Simoneau M.

The time-dependent parameters used in this study did not prove useful in differentiating between in-brace and out-of-brace conditions. Spectral analysis highlighted increased stiffness in the antero-posterior direction and less control in the medio-lateral axis in standing balance between in-brace and out-of-brace conditions in AIS.

[Rehabilitation of adolescent idiopathic scoliosis: results of exercises and bracing from a series of clinical studies. Europa Medicophysica-SIMFER 2007 Award Winner.](#)

Negrini S, Atanasio S, Zaina F, Romano M.

With an efficient management of data collection, it is possible to develop a set of studies aimed at verifying the efficacy of clinical daily rehabilitation approaches.

Outcome Measures

[Age-gender matched comparison of SRS instrument scores between adult deformity and normal adults: are all SRS domains disease specific?](#)

Baldus C, Bridwell KH, Harrast J, Edwards C 2nd, Glassman S, Horton W, Lenke LG, Lowe T, Mardjetko S, Ondra S, Schwab F, Shaffrey C.

Our findings confirm the SRS instrument has excellent discriminate validity in the adult population. It appears to be disease-specific in the domains of pain, appearance and activity in adult spinal deformity patients who have not had prior surgery.

Sport

[Adolescent idiopathic scoliosis and exercising: is there truly a liaison?](#)

Kenanidis E, Potoupnis ME, Papavasiliou KA, Sayegh FE, Kapetanios GA.

Our results demonstrate that systematic exercising is probably not associated with the development of AIS. Actively participating in sports activities doesn't seem to affect the degree of the main scoliotic curve either.

[The role of exercising in a pair of female monozygotic \(high-class athletes\) twins discordant for adolescent idiopathic scoliosis.](#)

Potoupnis ME, Kenanidis E, Papavasiliou KA, Kapetanios GA.

Adolescent idiopathic scoliosis seems to be a multifactorial skeletal disorder. The role of exercising and heredity in its development remain controversial.

Secondary Scoliosis

[Predictors of progression in patients with Friedreich ataxia.](#)

La Pean A, Jeffries N, Grow C, Ravina B, Di Prospero NA.

Multivariate analysis demonstrated that age at diagnosis, which may incorporate other genetic and environmental factors, is more important than GAA length in predicting cardiomyopathy, scoliosis, and disease progression

[Syringomyelia and Chiari's malformation in a child with scoliosis](#)

Weijenberg A, Brouwer OF, Hoving EW.

In children with structural scoliosis, ancillary investigation in the way of neuroimaging of the spinal cord should be considered to exclude underlying spinal cord pathology, even in the absence of neurological abnormalities.

[Syringomyelia-associated scoliosis with and without the Chiari I malformation.](#)

Akhtar OH, Rowe DE.

Most orthopaedic surgeons agree that a syrinx should be evaluated neurosurgically before any planned spinal arthrodesis to decrease the risk of neurologic injury connected with surgical correction. The indications for arthrodesis in these patients compared with those with idiopathic curves are evolving.

[Cohen syndrome resulting from a novel large intragenic COH1 deletion segregating in an isolated Greek island population.](#)

Bugiani M, Gyftodimou Y, Tsimpouka P, Lamantea E, Katzaki E, d'Adamo P, Nakou S, Georgoudi N, Grigoriadou M, Tsina E, Kabolis N, Milani D, Pandelia E, Kokotas H, Gasparini P, Giannoulia-Karantana A, Renieri A, Zeviani M, Petersen MB.

The discovery of this mutation has made carrier detection and prenatal diagnosis possible in this population

[Scoliosis in patients with Prader-Willi Syndrome.](#)

Odent T, Accadbled F, Koureas G, Cournot M, Moine A, Diene G, Molinas C, Pinto G, Tauber M, Gomes B, de Gauzy JS, Glorion C.

Scoliosis is a major concern for patients with Prader-Willi syndrome, and a regular (annual) systematic back examination is mandated. The role of growth-hormone treatment on the natural history of scoliosis could not be determined, and careful monitoring during treatment is recommended.

[Bone Mineral Content and Bone Mineral Density Are Lower in Older than in Younger Females with Rett Syndrome.](#)

Motil KJ, Ellis KJ, Barrish JO, Caeg E, Glaze DG.

his study identified associations among low bone mineral density, fractures, and scoliosis,

and underscored the need for better understanding of the molecular mechanisms of MECP2 in the regulation of bone mineral metabolism.

Congenital scoliosis

[Decreased body mass index and restrictive lung disease in congenital thoracic scoliosis.](#)

Bowen RE, Scaduto AA, Banuelos S.

Decreased pulmonary function compromise strongly correlates to low BMI in patients with congenital thoracic scoliosis. When considering moderate to severe restrictive lung disease as defined by FVC%, patients are at much higher risk of being significantly underweight. Body mass index is another important sign of thoracic insufficiency syndrome in these patients.

[Cerebral glucose metabolic abnormality in patients with congenital scoliosis.](#)

Park WW, Suh KT, Kim JI, Ku JG, Lee HS, Kim SJ, Kim IJ, Kim YK, Lee JS.

From this study, we could find the metabolic abnormalities of brain in patients with congenital scoliosis and suggest the possible role of voxel-based analysis of brain fluorodeoxyglucose positron emission tomography.

[Lung function asymmetry in children with congenital and infantile scoliosis.](#)

Redding G, Song K, Inscore S, Effmann E, Campbell R.

Asymmetric ventilation and perfusion between the right and left lungs occurs in more than half of the children with severe congenital and infantile thoracic scoliosis. However, the severity of lung function asymmetry does not relate to Cobb angle measurements. Asymmetry in lung function is influenced by deformity of the chest wall in multiple dimensions, and cannot be ascertained by chest radiographs alone.

[Congenital scoliosis, supernumerary nipples and spina bifida occulta.](#)

Panigrahi I, Saxena A, Marwaha RK.

Evaluation

[Idiopathic scoliosis and breast asymmetry.](#)

Denoel C, Ismael Aguirre MF, Bianco G, Mahaudens PH, Vanwijck R, Garson S, Sinna R, Debrun A.

A strong correlation is found between clinical parameters, anthropomorphic measurements and 3D scan analysis, suggesting that a meticulous clinical examination is sufficient to evaluate breast asymmetry in patients with idiopathic scoliosis. A patient who is properly diagnosed and informed of her skeletal deformity and breast asymmetry is more likely to have realistic expectations from breast surgery.

[Radiographic versus ultrasound evaluation of the Risser Grade in adolescent idiopathic scoliosis: a prospective study of 46 patients.](#)

Thaler M, Kaufmann G, Steingruber I, Mayr E, Liebensteiner M, Bach C.

Our findings suggest that ultrasound can be applied as an alternative method to X-ray evaluation in Risser Grade determination. It should be routinely used in clinical practice to reduce the patients exposure to radiation.

[Lateral steps reveal adaptive biomechanical strategies in adolescent idiopathic scoliosis.](#)

Bruyneel AV, Chavet P, Bollini G, Allard P, Berton E, Mesure S.

In scoliotic subjects, lateral stepping prompts specific dynamic behaviour affecting both limbs, in order to maintain balance during movement despite spinal deformation. This stepping task could be used in future studies to identify specific motor strategies.

[Validity and reliability of active shape models for the estimation of cobb angle in patients with adolescent idiopathic scoliosis.](#)

Allen S, Parent E, Khorasani M, Hill DL, Lou E, Raso JV.

The automated method was reliable for moderate-sized curves, and did detect vertebrae in larger curves with a modified training set of larger curves.

Unconventional treatments

[Adolescent idiopathic scoliosis treated by spinal manipulation: a case study.](#)

Chen KC, Chiu EH.

Chiropractic treatment was associated with a reduction in the degree of curvature of adolescent idiopathic scoliosis in this case, after half a year of conventional medical treatment had failed to stop curve progression. This suggests that in at least some severe and progressive cases of scoliosis, chiropractic treatment including spinal manipulation may decrease the need for surgery.

Exercises

[Specific exercises reduce brace prescription in adolescent idiopathic scoliosis: a prospective controlled cohort study with worst-case analysis.](#)

Negrini S, Zaina F, Romano M, Negrini A, Parzini S.

These data confirm the effectiveness of exercises in patients with scoliosis who are at high risk of progression. Compared with non-adapted exercises, a specific and personalized treatment (SEAS) appears to be more effective.

[Treatment of adolescent idiopathic scoliosis with quantified trunk rotational strength training: a pilot study.](#)

McIntire KL, Asher MA, Burton DC, Liu W.

Quantified trunk rotational strength training significantly increased strength. It was not effective for curves measuring 50 to 60 degrees. It appeared to help stabilize curves in the 20 to 40-degree ranges for 8 months, but not for 24 months. Periodic additional supervised strength training may help the technique to remain effective, although additional experimentation will be necessary to determine this.

Osteoporosis and metabolic alterations

[Does scoliosis causes low bone mass? A comparative study between siblings.](#)

Sadat-Ali M, Al-Othman A, Bubshait D, Al-Dakheel D.

Our study indicates that the scoliosis causes osteopenia and osteoporosis among girls while their siblings with normal spine remain with normal bone mass.

[Bone mineral accrual in osteopenic and non-osteopenic girls with idiopathic scoliosis during bracing treatment.](#)

Qiu Y, Sun X, Cheng JC, Zhu F, Li W, Zhu Z, Wang B, Yu Y.

It is concluded that nearly all of AIS girls had positive bone mineral accrual at LS and FN during over-1-year brace treatment. Brace treatment and the initial bone mineral status may not play important roles in the BMD accumulation. Growth potential of AIS patients is one of the key factors influencing bone mineral accrual during brace treatment.

[Changes of selenium, copper, and zinc content in hair and serum of patients with idiopathic scoliosis.](#)

Dasty M, Cienciala J, Krbec M.

Various changes in the content of trace elements in biological samples taken from patients with idiopathic scoliosis are not accidental. What might bring about a shift in our knowledge is speciation of various forms of trace elements in the organism in relation to idiopathic scoliosis.

Aetiology and pathogenesis

[Do adolescents with a severe idiopathic scoliosis have higher locations of the conus medullaris than healthy adolescents?](#)

Sun X, Chu WC, Cheng JC, Zhu F, Zhu Z, Yu Y, Wang B, Qiu Y.

The mean and the distribution of the conus locations were similar for AIS patients and the controls. No significant associations of the conus position with curve severity and with curve patterns were found, indicating that the conus location might not be involved in the pathogenesis and curve progression of AIS

[LINKS :](#)

Scientific Societies

www.sosort.org

www.sosort-lyon.net

www.spine.org

www.srs.org

www.liv.ac.uk/HumanAnatomy/phd/bss/bss.html

www.bsrp.co.uk

www.gss.it

www.gis.it

<http://www.boa.ac.uk>

Patients associations

www.escoliosis.org

www.scoliosis.org

www.sauk.org.uk

www.scoliosis-assoc.org

www.scoliosis-info-forum.de

www.scoliosis-australia.org

<http://scoliosi.forumfree.net>

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