

# Summer News

S c o l i o s i s   C e n t e r   o f   W i s c o n s i n

## June is National Scoliosis Awareness Month

Welcome to our first Scoliosis Center of Wisconsin Newsletter! In our opinion, the timing couldn't be better as we are now in June which is recognized as "Scoliosis Awareness month"

DID YOU KNOW:        Scoliosis affects between 4 and 5% of the Total Population

Prevalence rate of scoliosis in the elderly has been shown to be 68%

Females have a risk of curve progression 10 times higher than males

Adolescents with Idiopathic Scoliosis are at increased risk of osteoporosis compared to general public

There is not just one factor responsible for Idiopathic Scoliosis

### *Can I Play Sports with Scoliosis?*

*YES!!* We encourage virtually everyone, especially those with the SpineCor Dynamic Brace\* to participate in physical activity, sports, ect. There are sports, however, that are considered to be more advantageous. A rule of thumb is that sports that encourage the spine to be straight are recommended. These include stretching sports such as basketball, volleyball, swimming, judo, horseback riding, ect.

As with all life's endeavors, variability is the key. There are several problematic areas we need to be aware of when assessing the sporting arena.

Children exposed to dieting, weight loss, and intensive physical training are prone to a drop in estrogen levels, which promotes a delay in menarche, secondary amenorrhea, and irregular menses. Coupled with intensive training these factors certainly make the adolescent more vulnerable to spine lesions. Intensive training is considered sport engagement greater than 20 hours per week.

This prolonged intensive training can simply deteriorate the development of the muscular-skeletal system. Moreover, this scenario fosters further asymmetrical development due to imbalanced muscular forces and the increased joint flexibility present.

Adolescent females with idiopathic scoliosis seem to gravitate towards sports such as gymnastics due to their inherent joint laxity, a feature exhibited by patients with idiopathic scoliosis. This does not imply that gymnastics causes scoliosis at any level, however characteristic features of the disease seem to draw them to the sport of gymnastics. The message here is to not restrict or ban adolescents from sports such as gymnastics, but rather having them refrain from intensive and regular participation (72 hours per week).

Bearing this in mind, regular non-intensive physical activity is encouraged and considered beneficial as it also promotes health in other parameters, such as respiratory, psychological, muscular, etc.

The fact is the body is meant to move and perform dynamic activities. This is essential for the adolescent population as we know this is a critical time for optimum neuro-muscular connection, movement patterns, behavioral patterns, psychological development and many others. Unlike rigid braces that often pose a barrier to sports and various physical activities, the SpineCor brace harnesses these sports/activities to promote optimum spine and postural correction. Not to mention fostering healthy psychosocial development during a critical time period

For more information regarding the SpineCor Brace please visit [www.scoliosisspecialists.com](http://www.scoliosisspecialists.com)

Or for Sports and Activity questions contact Dr Schwab at [drmattschwab@yahoo.com](mailto:drmattschwab@yahoo.com) or by calling 715-838-0300

## How is Mainstream Medicine treating Scoliosis? Expert Article Dissected

A recent article was brought to our attention by several patients, most of whom do not have scoliosis interestingly enough. Marshfield Clinic recently published an article in their educational magazine Cattails entitled "Ask the Expert".

Several excerpts from this article have been quoted below from an orthopedic surgeon within this publication.

Let us be clear on the intention of this controversial breakdown of current mainstream scoliosis management.

1. Provide a more complete knowledge base for doctors and patients
2. Through education empower health care providers and patients

Recognition of conservative care as a viable option and the availability of such an option to be made known for each patient in the decision making process

***\*\*"When children are referred to me, I perform a clinical exam and order x-rays to determine the extent of the curvature. Generally, if the curvature is less than 25 degrees from normal, we do nothing more than continue to monitor the patient to make sure it doesn't get worse. Fortunately for most patients, the condition remains stable and we do not need to take any other action."***

Factual commentary.

***\*\*Monitoring*** curves as a management strategy has never been known, nor published in the scientific literature anywhere as an effective means of halting or even minimizing curve progression.

With regards to the statement, ***"the condition remains stable....."***

Scoliosis is a dynamic condition. It is never stable, it is either improving or worsening.

It goes on to discuss bracing recommendations.

***\*\*"Rigid Braces will not fix the curvature but can prevent it from worsening during the growing years".***

### SpineCor Patient Advantages

- Improved Comfort
- Easily concealed under clothing
- Good cosmetic
- Improved self image
- Increased compliance
- Allows normal activities of daily living



SCOLIOSIS CURVE	TLSO●	PROVIDENCE●	SPINECOR■
Correction/Stabilisation	15%	31%	96%
Progression over 6°	85%	69%	4%
Progression over 45°	56%	45%	9%
Progression to Surgery	79%	60%	2%

●Janicki J A, Poe-Kochert C, Armstrong DG, Thompson GH. A comparison of the Thoracolumbosacral Orthosis and Providence Orthosis in the Treatment of Adolescent Idiopathic Scoliosis: Results using the New SRS Inclusion and Assessment Criteria for Bracing Studies. *J Pediatr Orthop.* 2007 Jun; 27(4):369-374.

■Coillard C, Vachon V, Circo AB, Beausejour M, Rivard CH. Effectiveness of the SpineCor Brace Based on the New Standardized Criteria Proposed by the Scoliosis Research Society for Adolescent Idiopathic Scoliosis. *J Pediatr Orthop.* 2007 Jun; 27(4):375-379.

With regards to ... ***“Braces will not fix the curvature but can prevent it from worsening***

Correct, rigid braces will not fix the curvature. Rigid braces arguably are often not even at halting curve progression. This argument becomes more valid after adolescence. Why? Because even with patient compliance there is lack of muscle retraining, in fact potential muscle atrophy. Thus after bracing cessation the curvature has a tendency to regress throughout an individual's life time and commonly does.

Scoliosis is a neuro-muscular-skeletal condition. Bending bones, (in this case the spine) without engaging the neuromuscular connections (neural circuitry) will not ensure long-term correction since the muscles/soft tissues need to be re-trained accordingly. Unfortunately, rigid bracing also poses legitimate concerns of psychosocial consequences.

When bracing fails surgery is recommended.....

***“In about 5% of children with scoliosis, the curvature continues to worsen to more than 40 degrees, and surgery is usually required.”***

Some pertinent research regarding Scoliosis Surgery

Preoperative complications range from 5%-20% depending upon surgical approach and whether the complication is considered minor or major

Signs and symptoms of scoliosis have not been shown to be reversed with scoliosis surgery

Currently, there are currently no reported long term beneficial effects (balance, rib hump correction, cosmetic correction, pain, and patient satisfaction)

Currently, no long term risks have been reported on

All cases of spinal surgery exhibit loss of normal range of motion of spinal column

Post surgical patients commonly exhibit greater degenerative changes of the spine

In fact, the greater the surgical correction, the greater the rate of degenerative osteoarthritis

5%-10% of patients develop have been shown to develop infections 11-45 months post-surgery

Curvatures have been shown to progress in some patients due to broken rods or instrumentation failure

Curvatures have also been shown to progress in adolescents after spinal fusion due to *“crankshaft phenomenon”*.

Failure of surgical instrumentation requires re-operation

The rib hump can deteriorate post-operatively

Patients with initial rib hump correction post-operatively may lose this correction over time and ultimately end up with a greater rib hump than before surgery

**Summary: Research concluded that the only reason for scoliosis surgery is cosmetic improvement.** Today's conservative treatment measures illustrate that it can in fact yield equal cosmetic improvement to that of scoliosis surgery. These facts are supportive of conservative management and surgical intervention is rarely needed. In addition, quality conservative management programs should be made available by scoliosis practitioners regardless of specialty.

**References:**

Weiss, RH, Bess S, Wong SM, Patel V, Goodall D, Burg E: Adolescent idiopathic scoliosis – to operate or not? A debate article. Patient Safety in Surgery 2008, 2:25.



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### How to Screen for Scoliosis

This simple screening may help you be the first to notice changes in your child's spine. To check for potential signs of scoliosis in your child, have them disrobe and stand relaxed with arms at their sides. Here is what to look for:



Is their head level and centered over their trunk?



Are their shoulders the same height?



Are their hips at the same level?



When bent forward with arms dropping down towards feet, is rib cage level on both sides?

If you answered NO to one or more of these questions, please contact *Scoliosis Specialists* for further evaluation.