

# **The Application of the Schroth Method in Adolescent Idiopathic Scoliosis**



**The Adolescent Idiopathic  
Scoliosis**



**The Schroth  
Method**



**Demonstration**

# 1

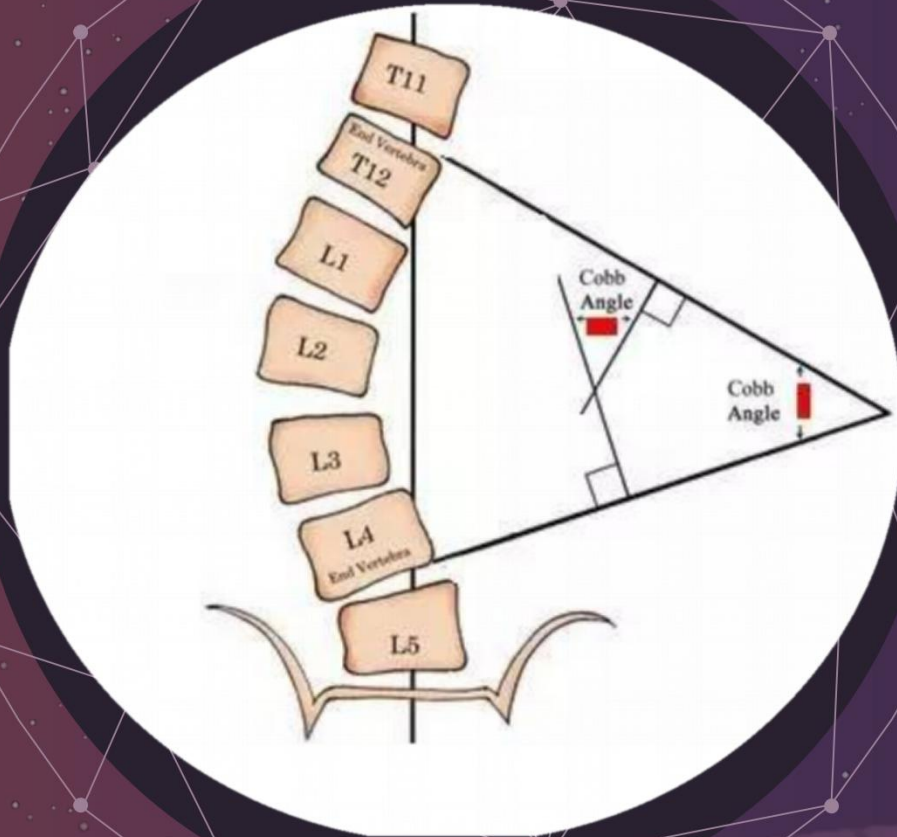


## The Adolescent Idiopathic Scoliosis



01

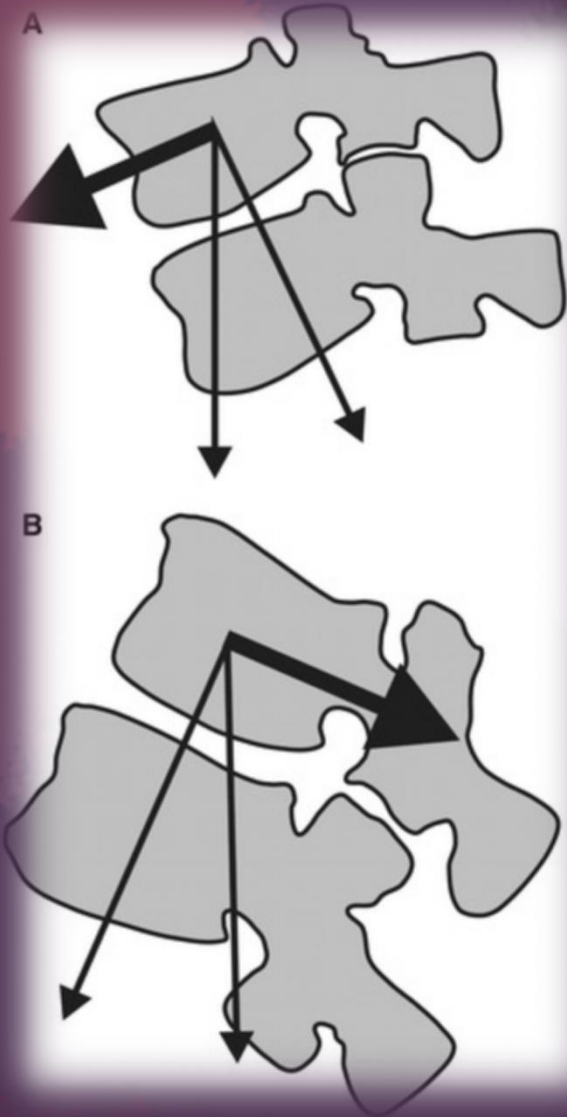
## The Adolescent Idiopathic Scoliosis



**Scoliosis** is a curve greater than  $10^\circ$  by Cobb method .( Hefti,2013)

**AIS** is a scoliosis that starts after the age of ten and has no clear under-lying disease as reason . ( Hefti,2013)

(Wechat Official Account:kangfuhuiys,2016.12)



( Orthop,2013 )

- **The enhancer :**

The dorsally directed shear loads during the growth.

- **Result :**

A progressive deformation of individual vertebrae and ultimately lead to progressive scoliosis. ( Orthop,2013 )



## 01 The Adolescent Idiopathic Scoliosis



(Trobisch, 2010)

- **Asymmetry** of the shoulders, chest, or pelvis .
- **Fibrosis and fatty involution** in the concave side .
- **Muscular atrophy, necrosis, hyaline fibers** in both sides. ( Wajchenberg , 2015 )



# The Physiotherapy in Adolescent Idiopathic Scoliosis

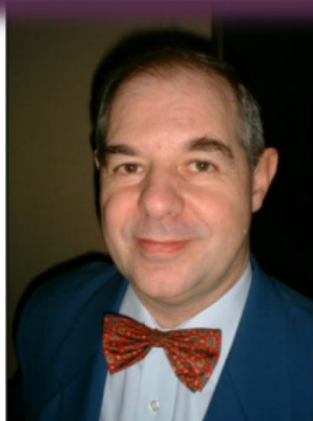


Fig. 1 Dr. Jean Claude de Mauroy, co-inventor of the new Lyon Brace (Asymmetrical Bled Tension Brace)



Fig. 69 Tony Betts, school leader and physical therapist teaching the SideShift method (UK)



Fig. 62 Dr. Krystyna Dobosiewicz (1931–2007), founder of the DoboMed treatment method of scoliosis



Fig. 32 Scientific Exercise Approach to Scoliosis (SEAS) school leaders Antonio Negrini (a), Michele Romano (b), and Alessandra Negrini (c)



Fig. 78 The Functional Individual Therapy of Scoliosis (FITS) school leaders, Marianna Bialek and Andrzej M'hango

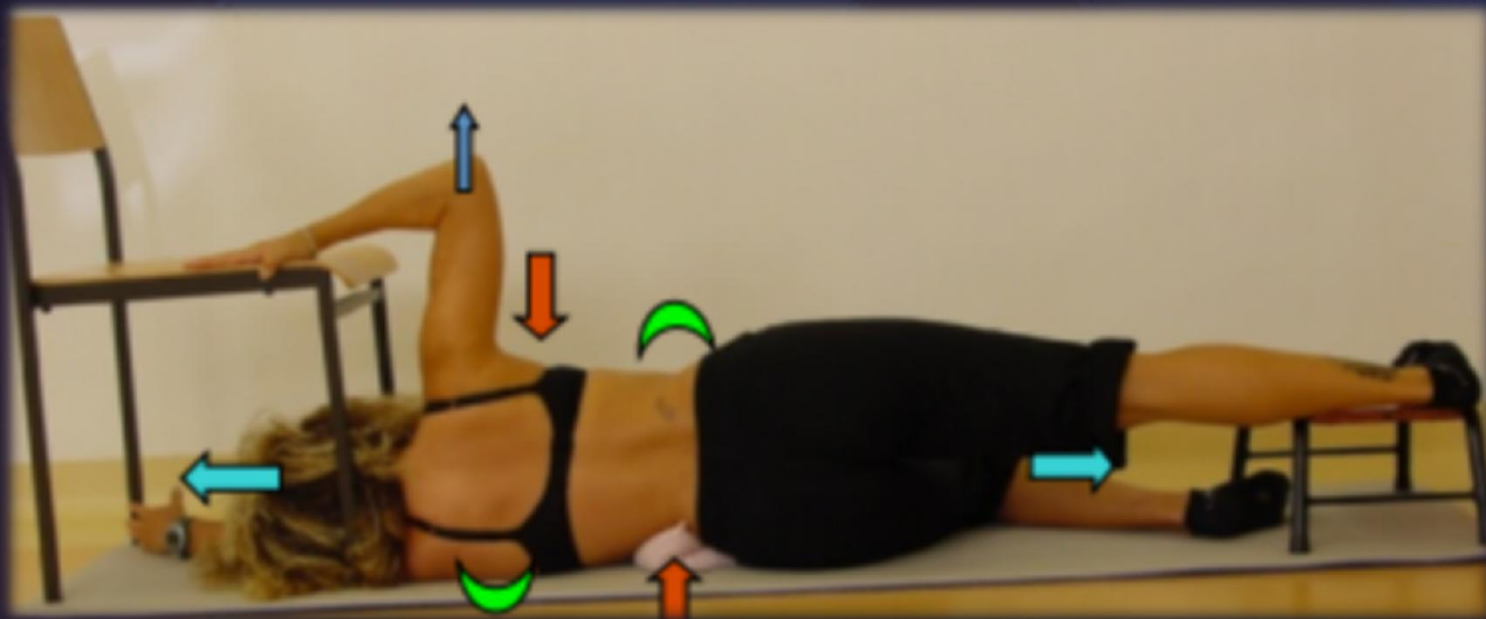


Fig. 22 Axel Hennes, head of the physical therapy department at the University of Cologne

## The Physiotherapy in Adolescent Idiopathic Scoliosis



Fig. 22 Axel Hennes, head of the physical therapy department at the Asklepios Katharina Schroth Spinal Deformities Rehabilitation Centre in Bad Sobernheim, Germany



( Berdishevsky , 2016 )

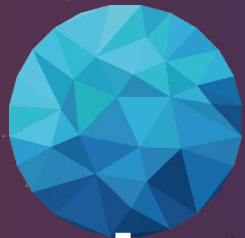
( Berdishevsky , 2016 )

- **Applied in most countries and even been the gold standard.**
- **Primarily used for adolescents idiopathic scoliosis.** ( Berdishevsky , 2016 )





# 2



## Introduction of the Schroth Method





## The Schroth Method

# Brief Introduction Of Schroth

- Developed by Katharina Schroth.
- A physical therapy treatment approach that uses manual therapy techniques and scoliosis-specific exercises tailored to each individual. ( Berdishevsky , 2016 )



( Weiss ,2011 )

02

## The Schroth Method

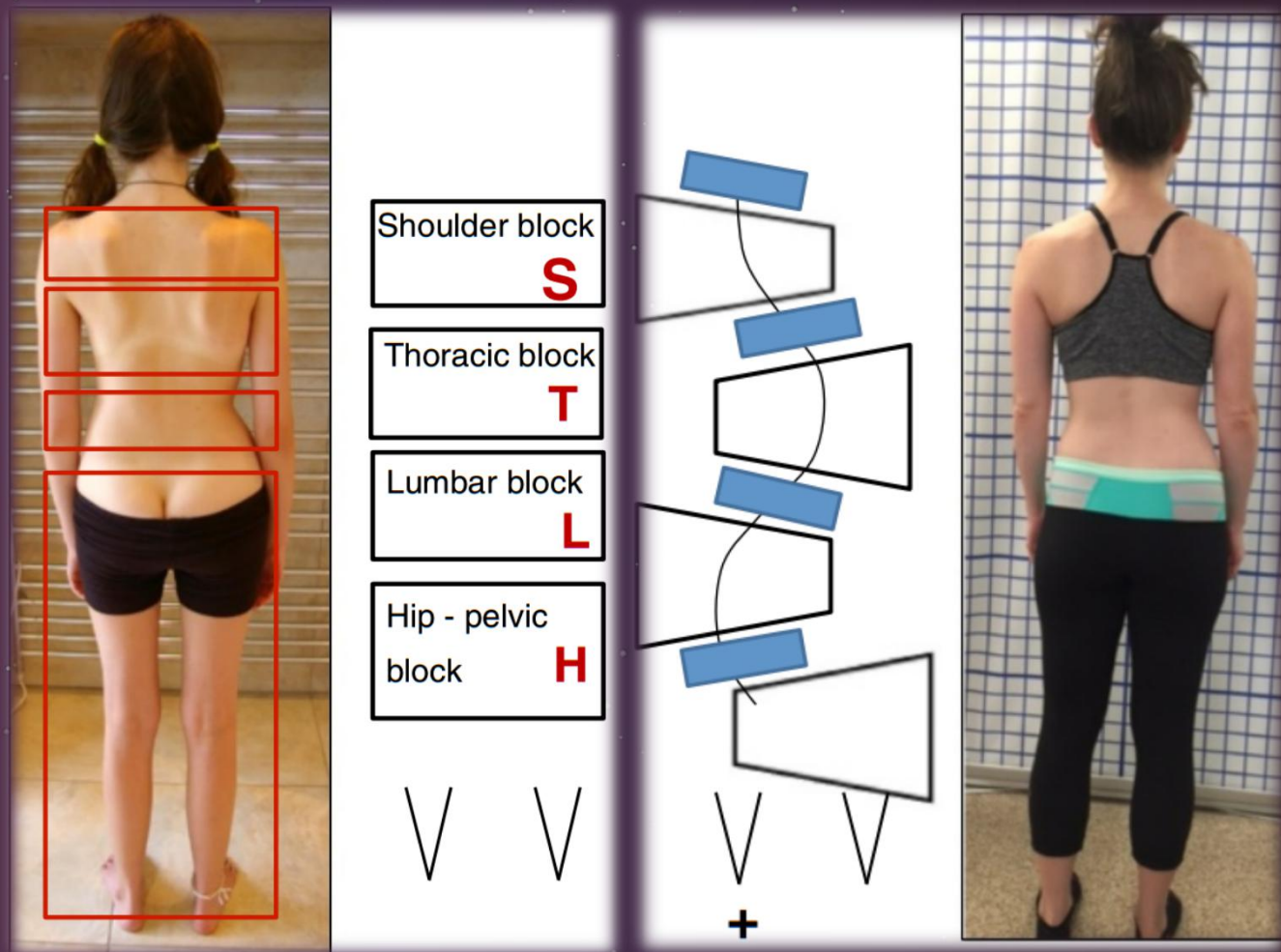


( Kim KD ,2016 )

## Goals of the Schroth Method

- Correct spinal rotation and increase lung capacity.
- Restore normal spinal position with pelvic corrections, breathing technique, and stabilizing isometric contractions.
- Improve the posture during routine daily life. (Kim KD ,2016)

# The Classification System of Schroth

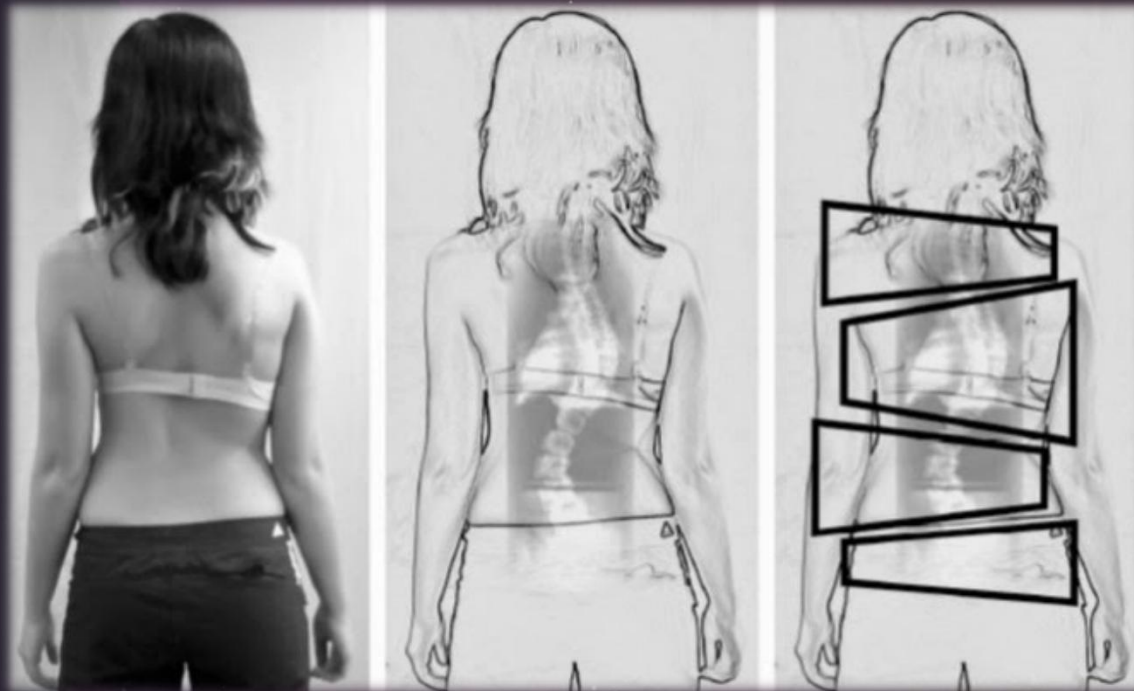


(Berdishevsky, 2016)



## 3D Principles of Correction

- Autoelongation (detorsion);
- Deflection;
- Derotation;
- Rotational breathing;
- Stabilization. (Lee HJ,2016)



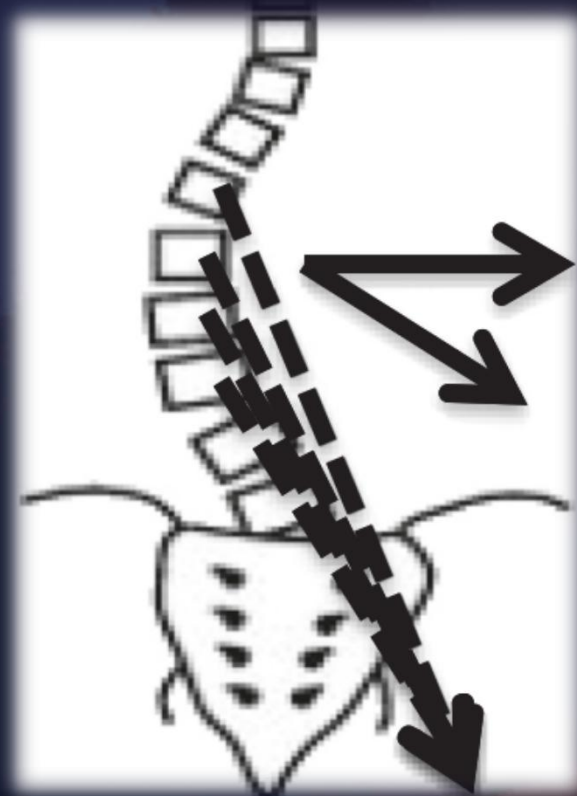
(Lee HJ,2016)



## The Schroth Method

### The Activation of Muscles

- The iliopsoas
- The quadratus lumborum
- The erector spinae (Kim KD ,2016)

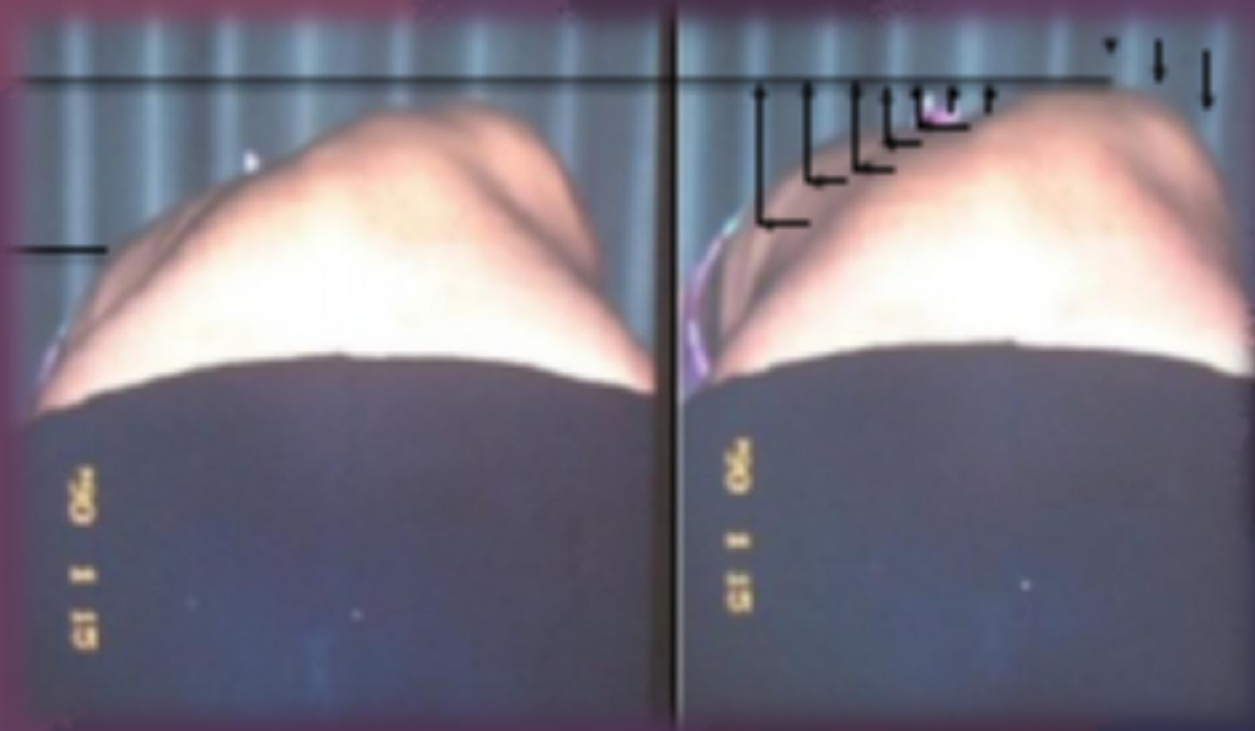


The background is a dark purple space filled with small white dots. A large, light purple number '3' is centered. The word 'Demonstration' is written in white, bold, sans-serif font across the middle of the '3'. Various geometric shapes, including triangles and pyramids in shades of blue, teal, orange, and white, are scattered around the '3'. In the top left, there is a blue sphere made of many small triangles. In the bottom right, there is a wireframe sphere with a purple band around it.

# Demonstration



## The Schroth Exercise



( Berdishevsky , 2016 )

### 1. Rotation Angular Breathing

- Help them know the feeling about breathing with one side

( Berdishevsky , 2016 )



## The Schroth Exercise

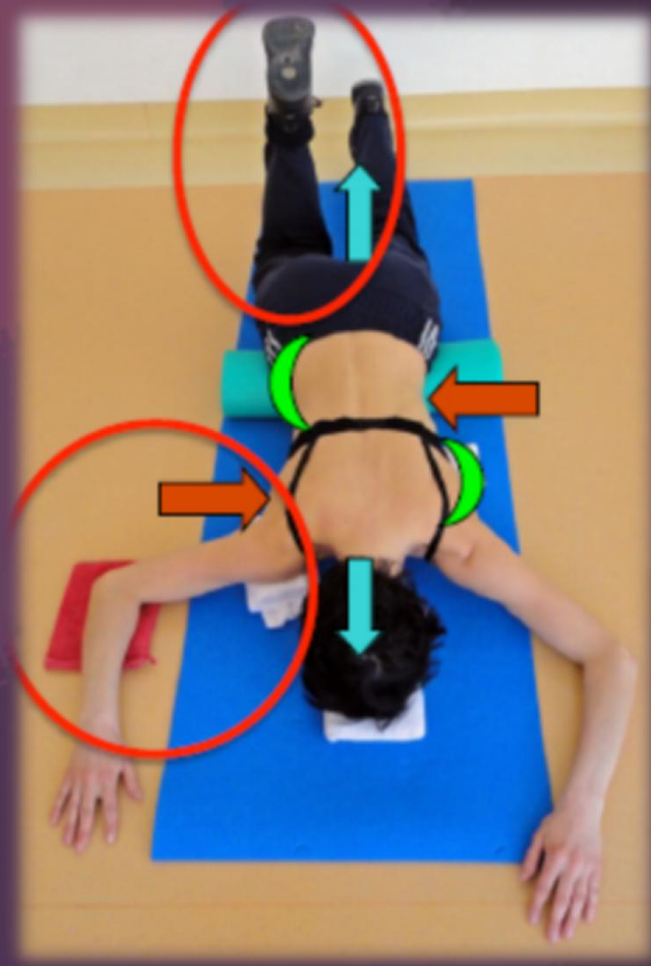


( Berdishevsky , 2016 )

### 2.The Schroth “Sail” Exercise

- During activation, the patient is consciously expanding the left rib cage by contracting the muscles which can adduct shoulder.

( Berdishevsky , 2016 )



### 3.The Schroth Prone Exercise

- Contract dorsal muscles to reset right scapular which be moved forward because of curve.
- Raise leg at the concave side.
- protract left arm to expand the concavity.

( Berdishevsky , 2016 )



03

## The Schroth Exercise



( Berdishevsky , 2016 )

### 4. “Muscle-cylinder” Exercise

Lie on the lumbar convex side.

- Lumbar convexity is supported by a towel to help align the spine in the horizontal plane.
- Offer a force from right arm to against the chair. ( Berdishevsky , 2016 )

It is our duty and pride  
to improve  
the quality of patients' life,  
not just  
focus on the disease itself...





- **Emphasize teaching postural corrections throughout the day**
  - 1 ) Decrease progression and pain
  - 2 ) Allow patients to spend more time in leisure activities and to live a normal life. ( Berdishevsky , 2016 )

# Reference

**Official Website:** <http://www.schrothmethod.com>

**Reffered Book :** 《脊柱侧弯的三维治疗》

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# Thanks for your attention!

**Presenters : Wu Lishan    Li Jianbang    Wei Xiaoyu**