

# 청소년기 척추측만증

## Adolescent idiopathic Scoliosis

### 보조기 및 교정 치료





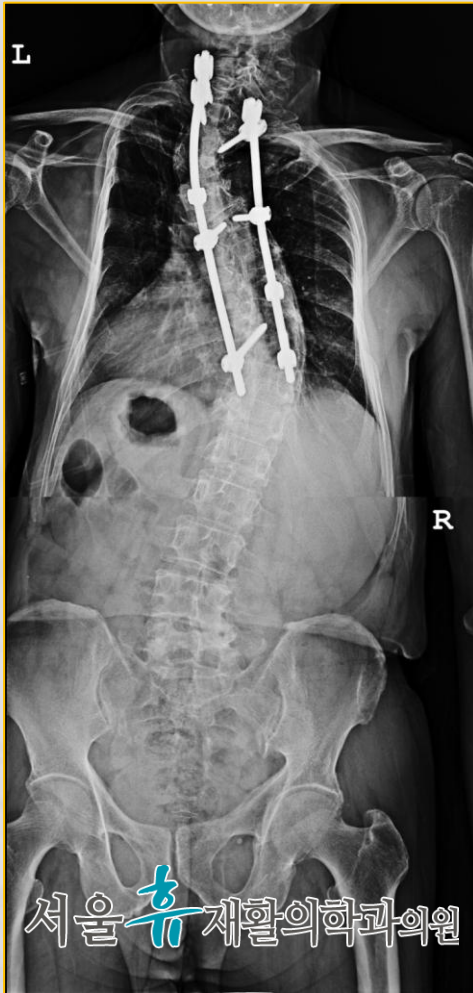
## ❖ 자격 및 면허

재활의학과 전문의  
스포츠의학과 분과 전문의

## ❖ 경력

서울대학교분당병원 외래진료교수  
SNUBH musculoskeletal fellowship  
International Society of Physical  
and Rehabilitation Medicine (ISPRM) membership  
대한재활의학회 정회원  
대한스포츠의학회 정회원  
독일 척추측만증전문 카타리나쉬로스기념병원  
국제 치료자과정 이수 - 국내 의사 중 최초





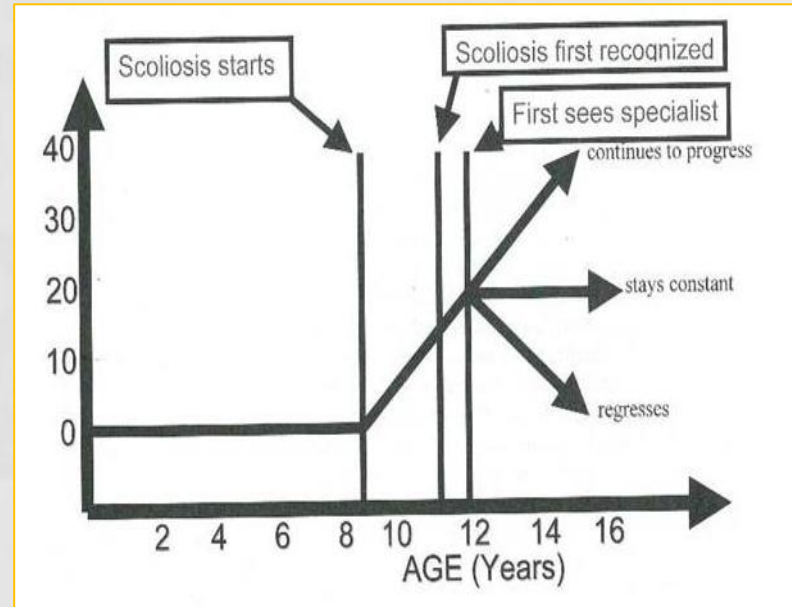
-1944 birth

- Male

- Pre op. C/C  
: post. Neck pain

- Op. goal  
prevention of SCI &  
pain control





# Conservative Tx (other than bracing) are not useful ???

- Exercise dogma

  - : in the orthopaedic literature

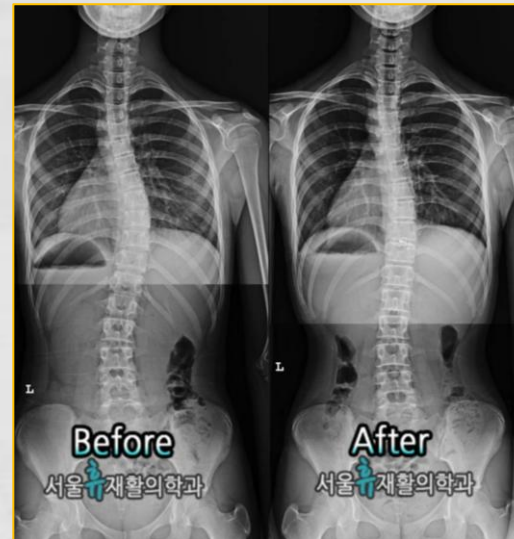
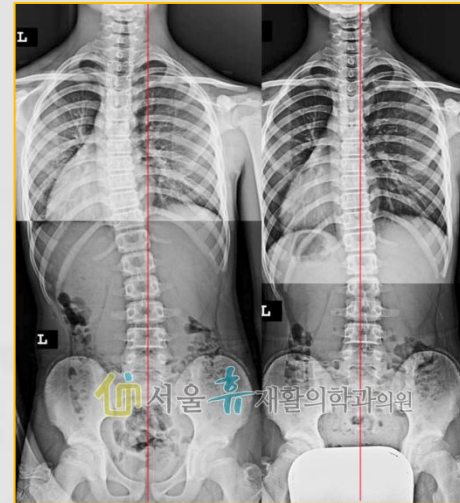
  - general methodology – poor quality

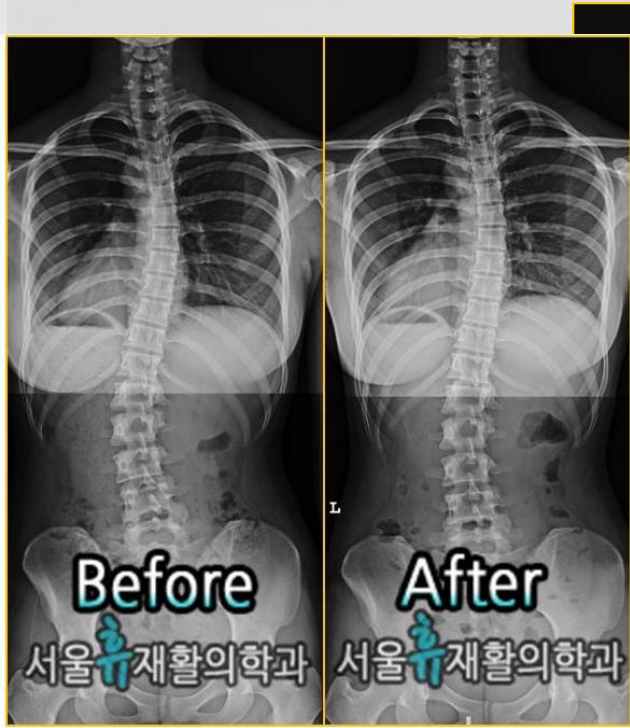
- ➔ PSE (physiotherapeutic specific exercise)

  - SIR (special – inpatient rehabilitation or scoliosis – intensive rehabilitation)

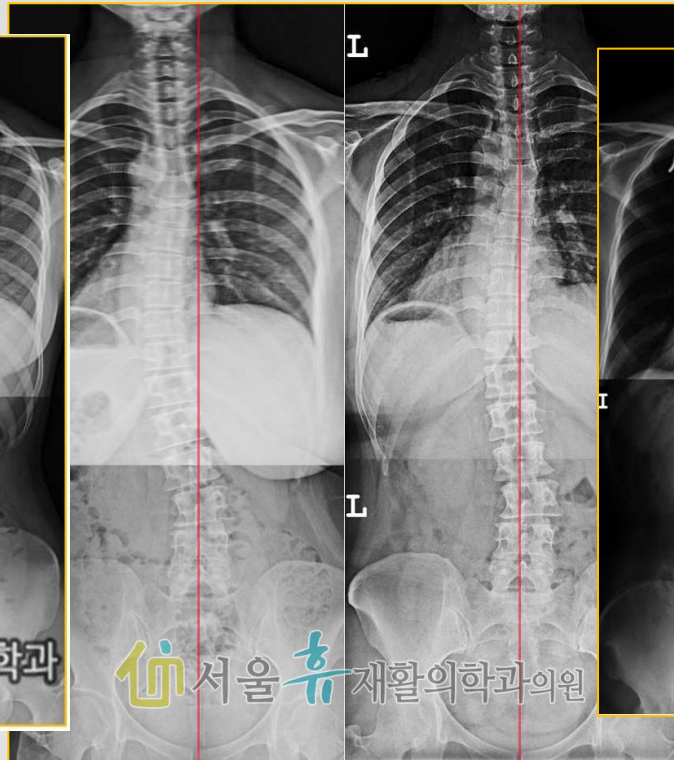
  - : proves of efficacy



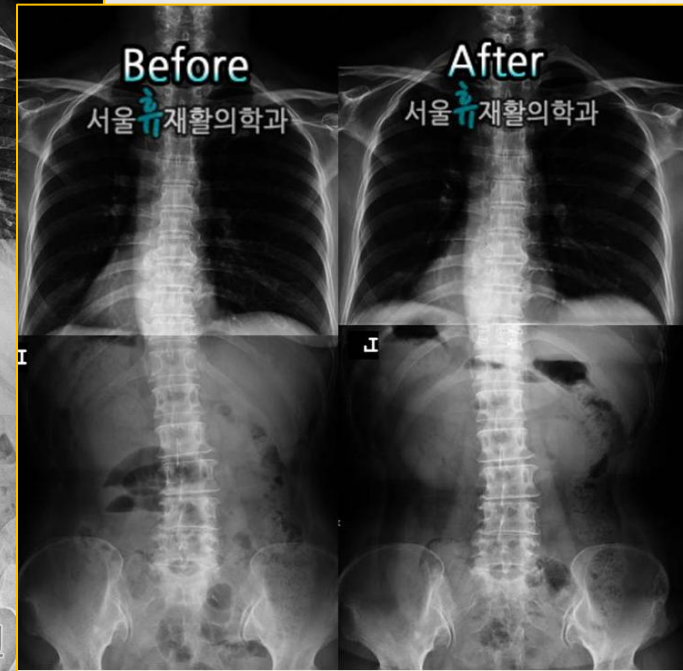




22 세



44 세



56 세

## ● Brace

- To prevent aggravation
- 22 hr schedule
- 25~45 degree
- Apex at T 9 or lower : TLSO  
apex higher T9 : Milwaukee brace  
Specific brace (schroth, Rigo brace etc..)  
: below T 6

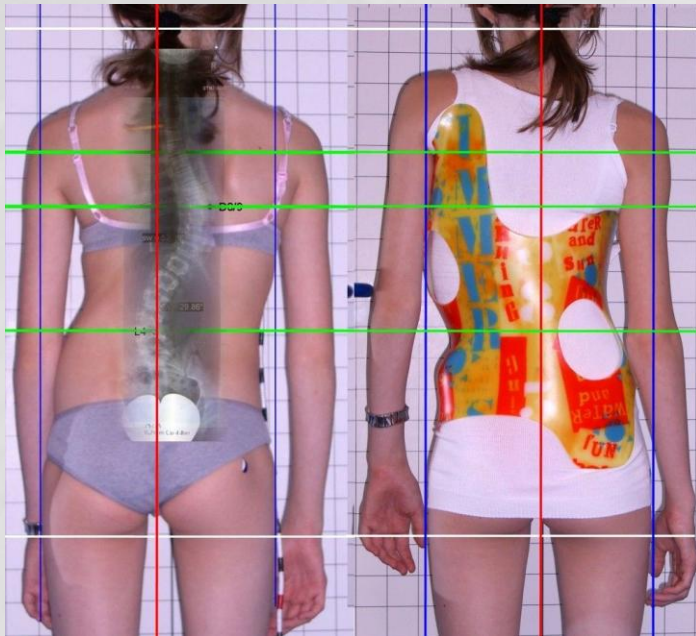


## ● Dilemma of Brace

- Psychological problem
- adaptation
- Effect of prevention ???

→ Night-time brace ???

# ○ Brace



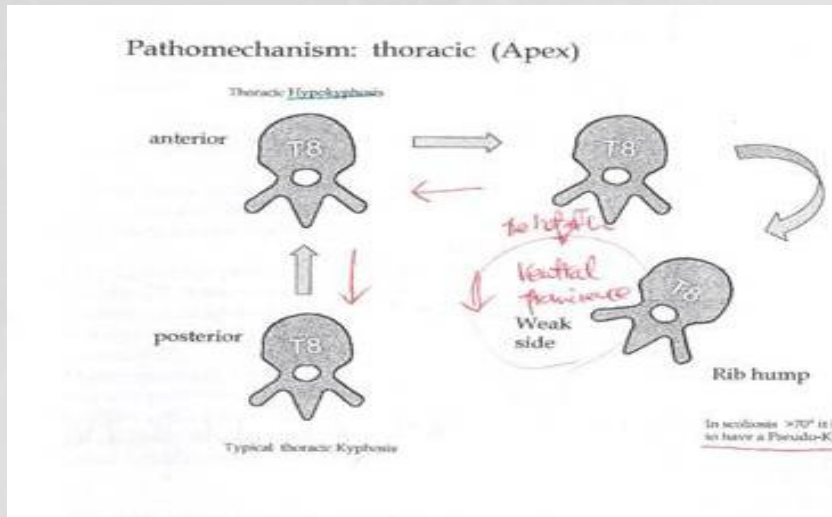
## ● Brace



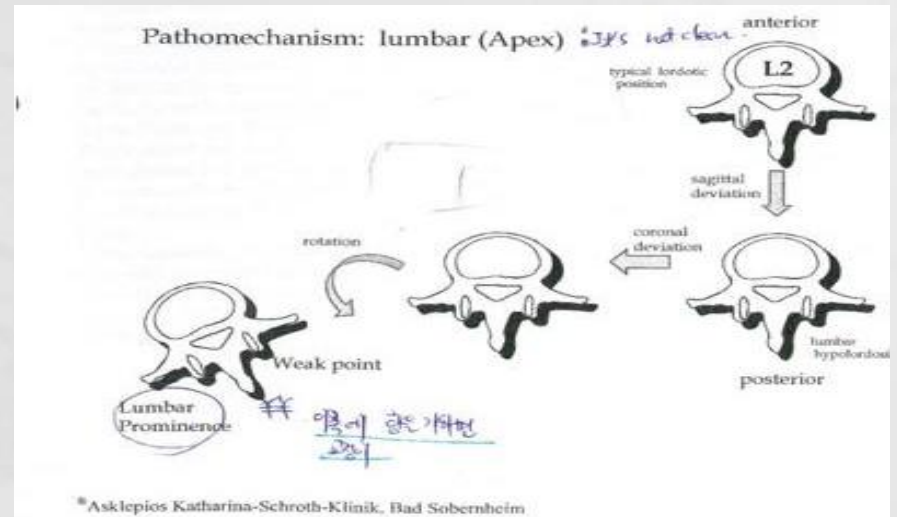
# ○ 교정 치료



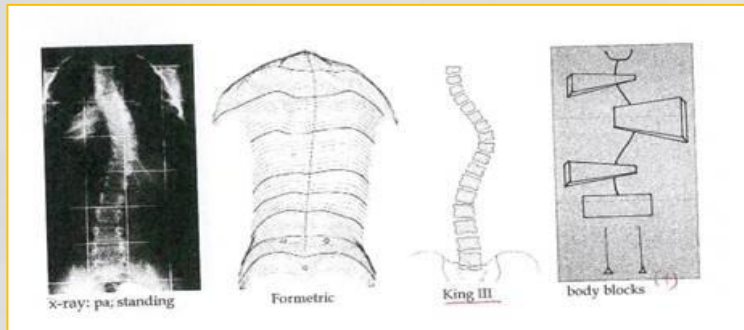
## Pathomechanism: thoracic (apex)



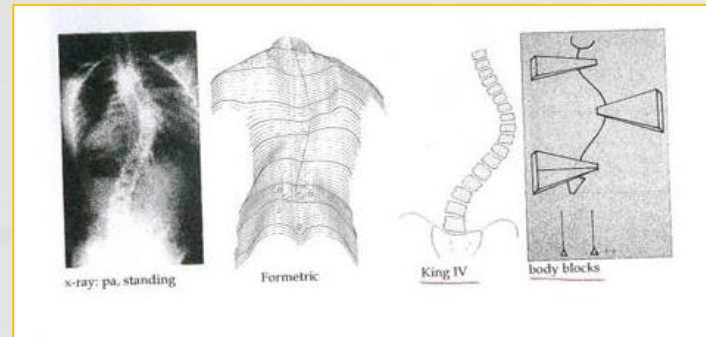
## Pathomechanism: lumbar (apex)



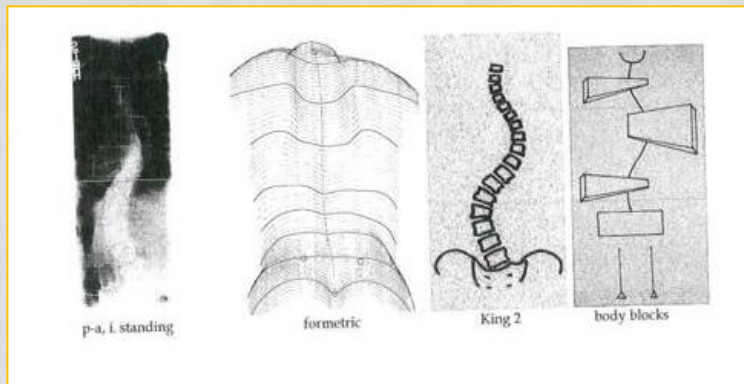
### 3 C right



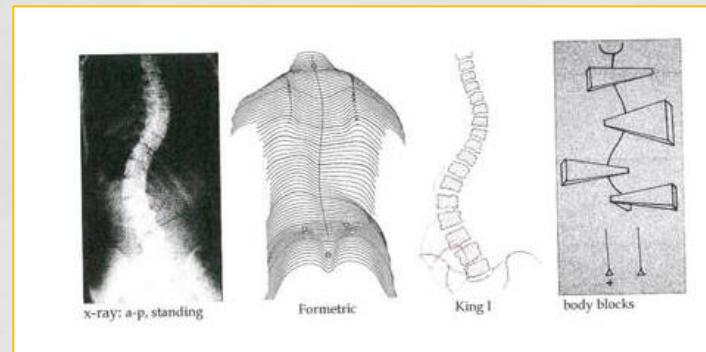
### 3 CP right



### 4 C right



### 4 CP right




# ○ 철학

- Self regulation




# Manipulation – thoracic curvature



1. side bending in sitting position


- with shoulder tilt and apical shift



2. side shift in sitting position →


- side gliding with the chest to the thoracic concave side with fixed apical lumbar area

*Add lumbar*



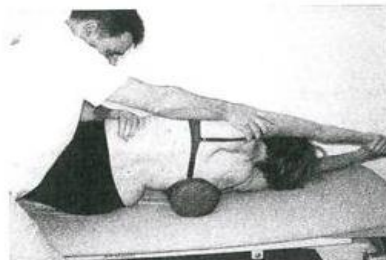
3. Derotation of rib hump

- with fixation of shoulder of the thoracic convex side and rib hump pushed forward and medially




4. Derotation of ventral prominence

- with fixation of shoulder of the thoracic concave side, and ventral prominence pulled sideways and dorsally



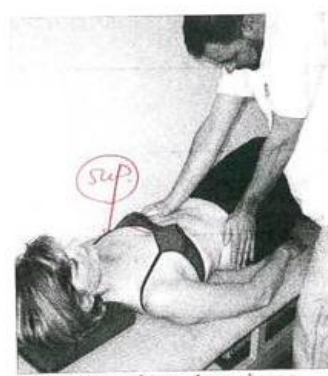
5. Stretching of the weak side

- sidelying on the thoracic convex side, passive support under the rib hump with additional passive derotation of the chest.
- mobilization in the thoracic concavity including ribs, intercostal muscles, skin, connective tissue



6. Rib hump derotation in supine

- rib hump is moved forward and medially while pelvis is stabilized in posterior direction



7. Derotation of ventral prominence

- ventral prominence is moved laterally and dorsally while pelvis on thoracic convex side is dorsally stabilized
- stretching of oblique abdominal muscles
- derotation of the thoracic curve



# Manipulation – lumbar curvature



1. Pelvic tilt

- sitting sideways on a chair, pelvis of the thoracic convex side in abeyance.
- the chest is shifted to the thoracic concave side and stabilized .
- position of the leg on the thoracic convex side either with hip flexion foot on the floor, or with hip extension and knee caudally directed supported on a cushion
- drop down with the pelvis (knee) on the thoracic convex side with passiv support on the pelvis and the lumbar prominence
- keep the lumbar lordosis

- repeat the movement several times
- main focus on the lumbar correction

Easy home exercise for mobilization of the lumbar curve!



2. Derotation of the lumbar prominence

- lumbar prominence pushed anterior medial. Fixation of the rib hump in the direction anterior medial.



3. Sagittal corrections

- contact on lumbar L2/1 thruste in anterior direction to increase lumbar lordosis. Sternal fixation to keep thoracic flexion.



4. Derotation of lumbar prominence in prone position

- lying in prone position; contact with the thumb on apical lumbar transverse process. Support with the other hand in anterior and medial direction.



5. Sagittal lumbar lordosation prone on forearms

- sphinx-like position
- pa-mobilization of lumbar apical segments
- thoracic kyphosation with passive sternal support



6. Stretching weak point

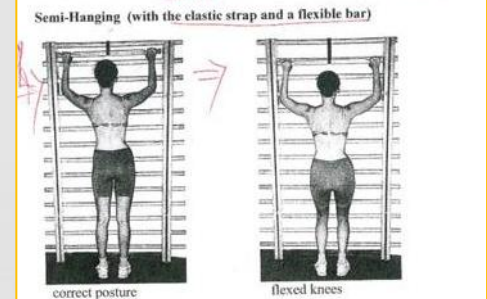
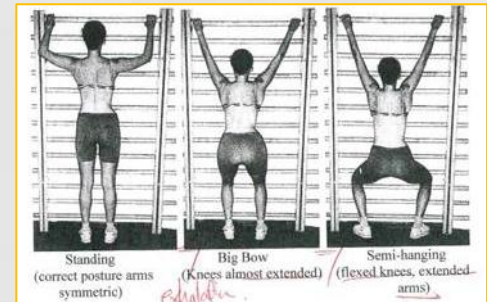
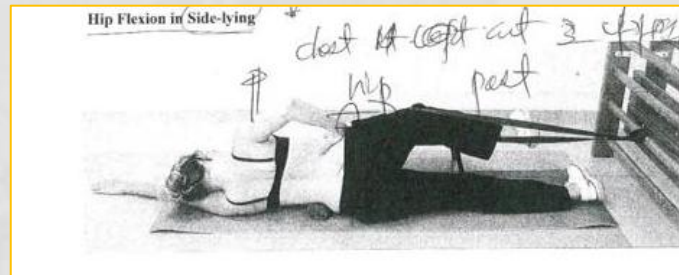
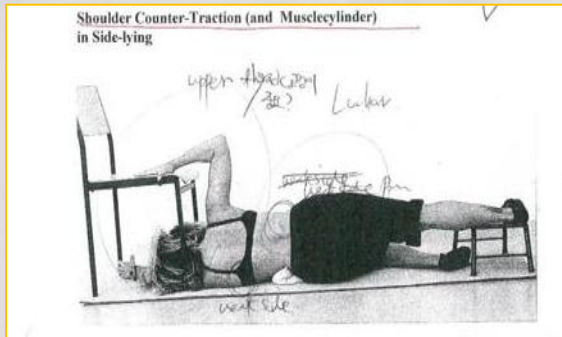
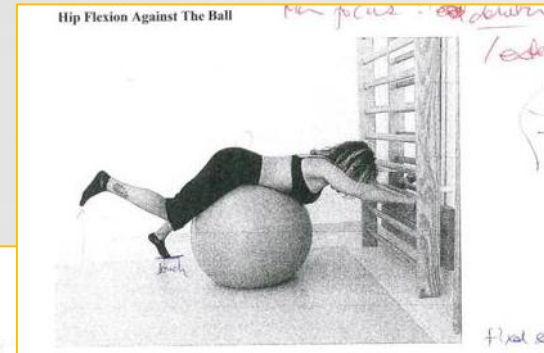
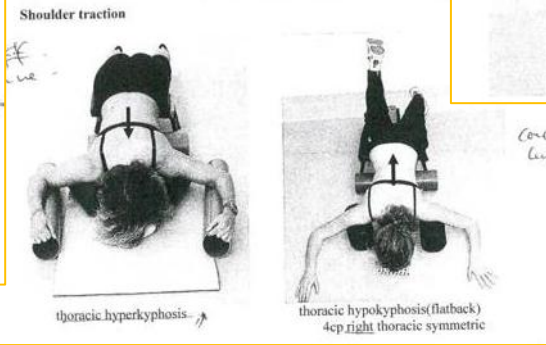
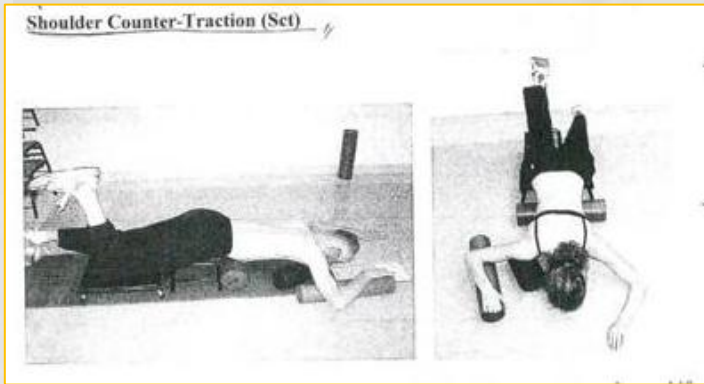
- sidelying on the thoracic concave side
- passive support on lumbar convexity
- passive techniques for the weak point



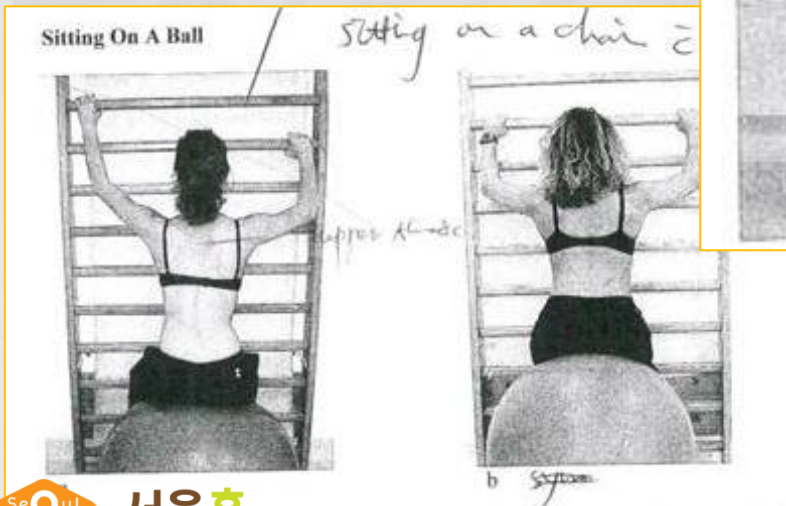
7. PNF posterior depression

- sidelying on the thoracic concave side;
- resistance on the sit bone
- active shift against the resistance in posterior depression

# PSE (physiotherapeutic specific exercise) : self correction and eccentric force make



# Training in ADL : : maintain curvature , not compressed





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