

SKELETAL AWARENESS & DEXTERITY

EXERCISE YOUR THORAX

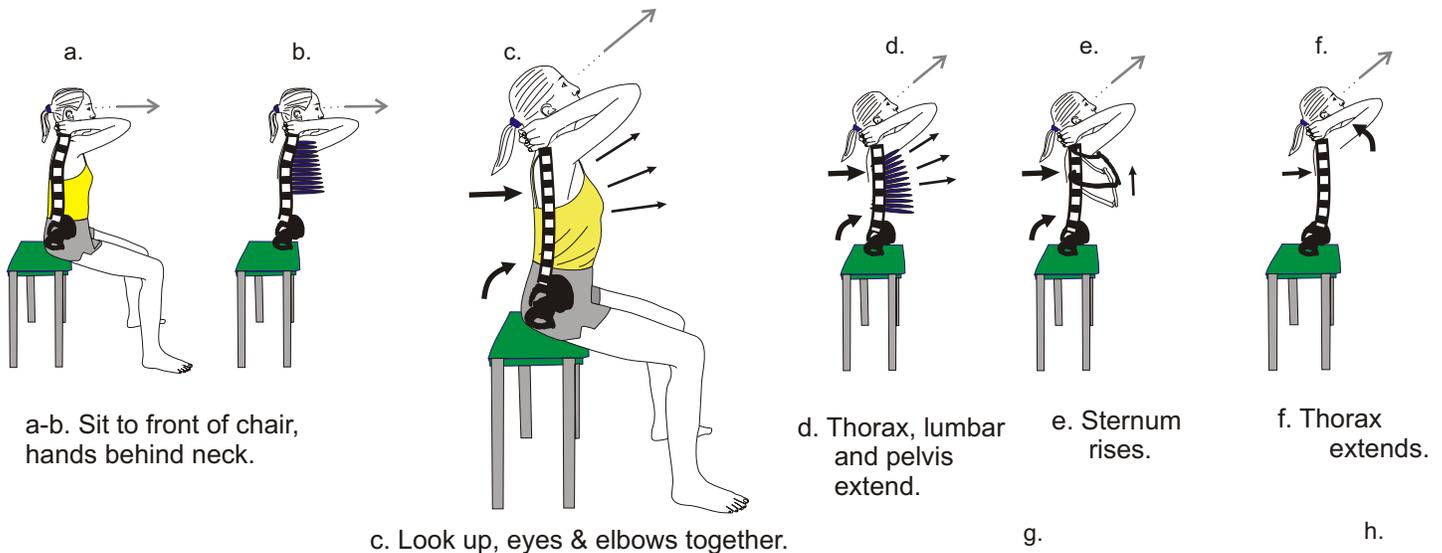
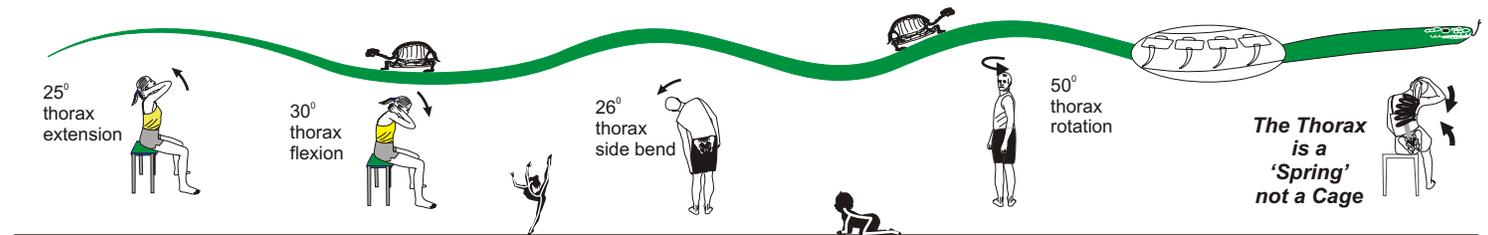
Robert Burgess BEd, PT, PhD, Feldenkrais Practitioner

Newsletter September 2009

The Feldenkrais Method: Better Body-Better Mind

The Thorax: A mobile flexible spring & missing link in human motion

Recap: In the previous newsletter I dispelled the common myth that the thorax or rib cage is a rigid structure. As well as movement available for breathing, the thorax is amazingly flexible in human motion. I used the **Snake** and the **Turtle skeletons** along with the mechanical **Spring** to illustrate the **extremes and variability** of thorax motion. Human thorax rotation and side bend are vital contributors to walking, throwing and reaching while thorax flexion and extension are significant during sit to stand and lifting a box from a bench to a shelf. A rigid rib cage is linked to many human issues- poor balance, depression, posture, osteoporosis, breathing difficulties, mortality, low back pain and shoulder pain.



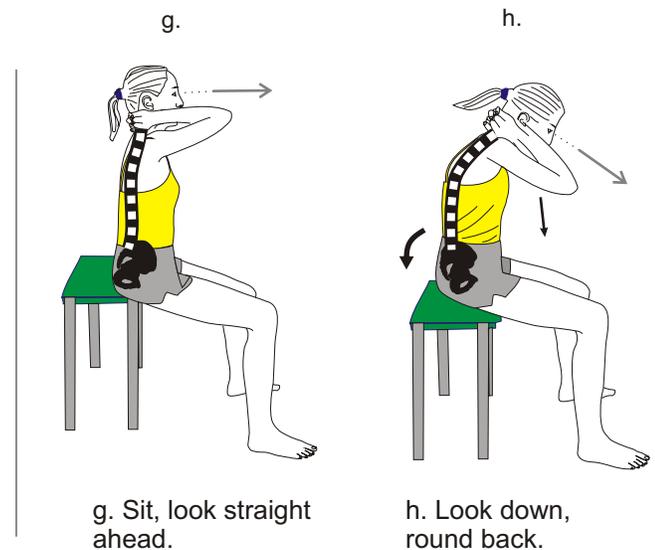
A Flexible Kyphosis: stem the decline

To begin to create and keep a flexible thoracic kyphosis, it is necessary to feel it move. With hands clasped behind the neck (not the head), the neck is now braced and can't move so well (figure a-b). Hence when looking up the intention is to keep the neck braced and allow the entire back (T1 to pelvis) but especially your thorax, to perform the action of looking up (figure c).

Sensing and directing attention. Sense the vertebrae between your shoulder blades (figure c-f). Feel the front of the ribs open and the sternum rise (figure c-e). By directing your attention to the middle back or upper you can make and feel that part move. Close your eyes, try to visualize or mentally see the vertebrae and ribs moving. **Study your thorax** moving.

Continue to look up and then back to the horizon (figure a-f). As you continue make the movement smaller and slower. Smaller and slower brings a **finer sense and clearer motor control**.

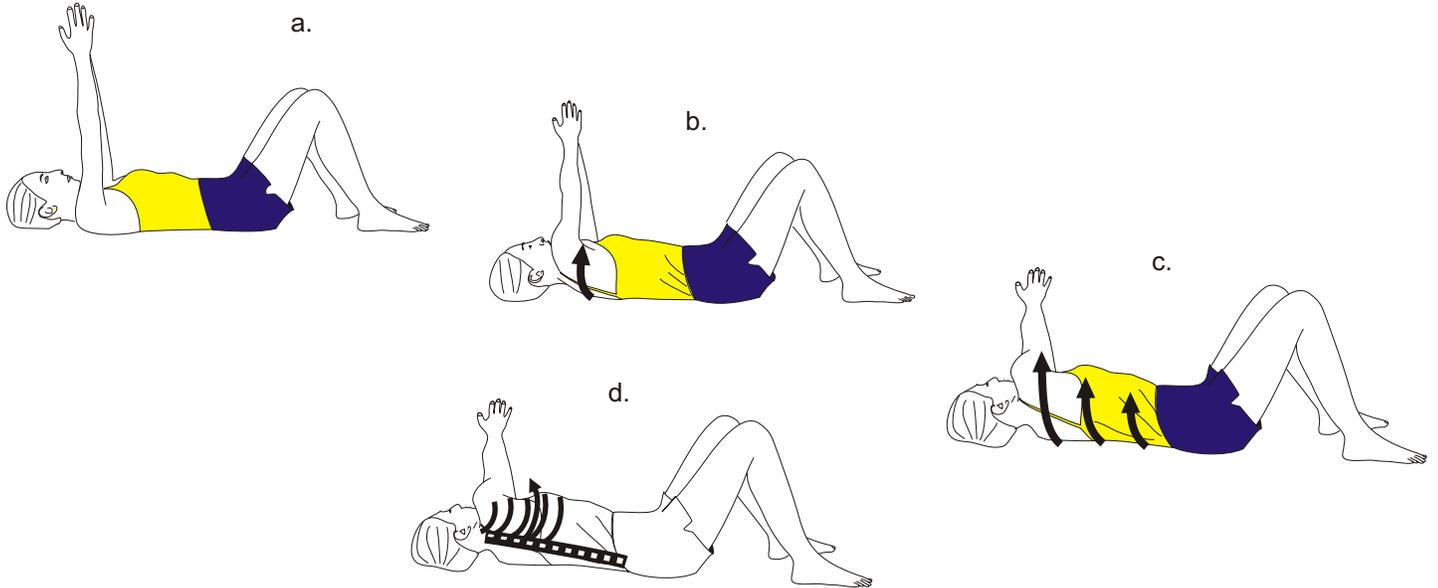
Repeat for looking down (flexion)(figure g-h).



EXERCISE YOUR THORAX

Thorax rotation in supine

Lie on your back and raise both arms vertically with palms together (Figure a). Tilt both arms to the left by raising your right shoulder blade from the floor and rolling onto your left shoulder blade (Figure b). Feel the vertebrae between your shoulder blades. Feel your rib cage roll and change shape. Watch (mentally) your sternum roll to the left. Begin very small (Figure b). With small and slow motions you can feel more. Sense the vertebrae, the ribs, the sternum and all the way down to the low back, pelvis and hips. Study the motion. Get to know your spine and thorax.



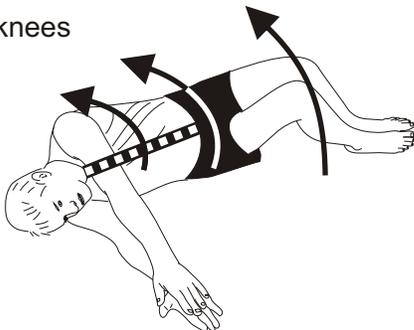
Continue and explore tilt and rolling a little further (Figure c). Always to sense your anatomy. Always a study of your motion and moving and doing. Do you force it? Do you rush it? Do you just want to get it over with? Take time to observe, sense and feel. Get to know how your thorax works. As well as getting to know your thorax you are exploring how you go about learning new things. Sense the ribs on the right side as they roll away from the floor (Figure d) and the ribs on your left side as they roll more onto the floor.

Notice what happens with your feet. Do you push with one foot a little? Good movement always involves the entire body; starting with one segment and eventually all segments contributing to an action. There are many ways to feel and explore rotation of your thorax. This is one way. This is trunk rotation from top down. Repeat to the right.

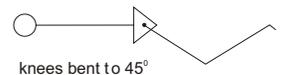
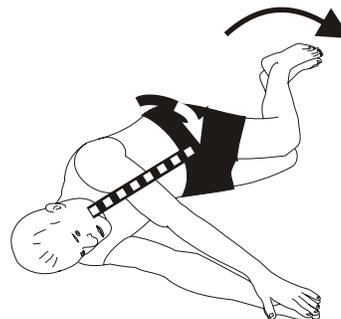
Thorax and trunk rotation on your side

You can rotate also your thorax and trunk from the bottom up (Figure e-f). Lie on your right side with your legs bent as in the stick figure below. Your feet are beneath your hips and your knees are at 45 degrees. Raise both knees from the floor leaving your feet on the floor (Figure e). Feel your left hip roll backward toward the floor. Feel the length of spine rolling/rotating. The rotation of the low back can extend up into and through your thorax. Now raise both feet, roll them forward to also roll the pelvis and left hip forward (Figure f). Feel the rotation of the spine extend all the way up to your neck. Now alternate- once raise the knees, once raise your feet. The thorax rotates in both directions backward and forward.

e. lift both knees



f. raise both feet forward



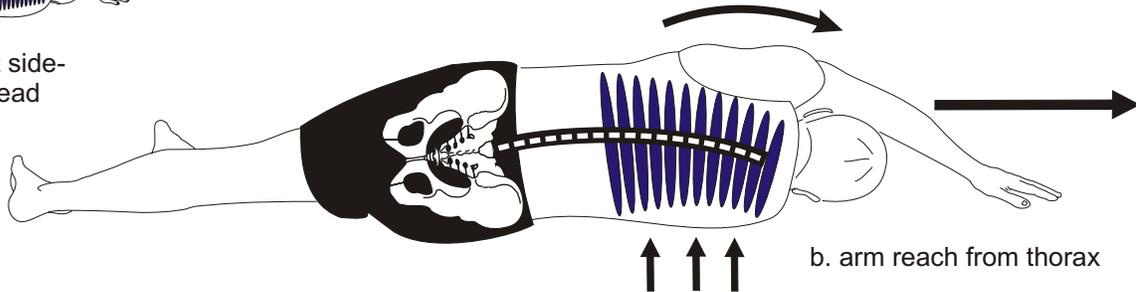
EXERCISE YOUR THORAX



Arm Reach on Side



a. Lie on right side-
arm overhead



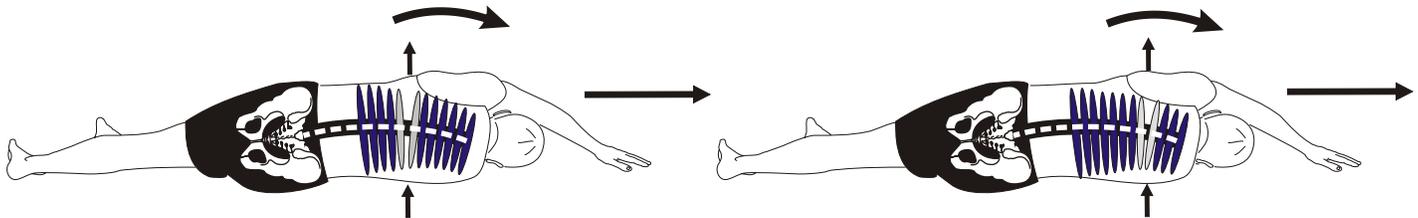
Lie on your right side with your left leg straight beneath you (the right leg can be bent or straight) and your left arm over your head (Figure a). If this strains your shoulder, place a pillow over your left ear between your arm and head (not shown).

The action is to reach the arm longer over head by pushing from your body. The rib cage along the left side opens and lengthens (Figure b). To do this the muscles of the right side of the rib cage must contract. Think of lifting the right side of the rib cage away from the floor (Figure b- small arrows).

Remember the anatomy here- a length of spine and the rib cage like a spring. The arm and shoulder are relaxed and passive, they don't do any work. Push the arm long by shortening the rib cage along the right side and lengthening on the left. Keep trying, it will come to you. Lift the right side of your rib cage away from the floor. It is a small motion, a little lift. As you begin to do this more easily and can comfortably continue the motion, bring your attention to the anatomy of your rib cage. Feel the right side shortening, the left side lengthening, feel the length of spine bending (Figure b).

c. differentiate middle thorax

d. differentiate upper thorax

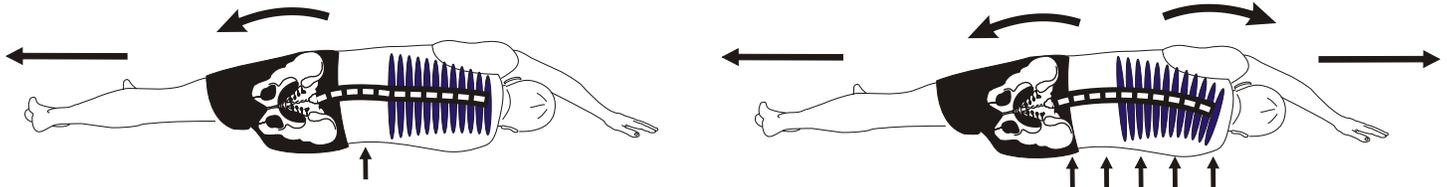


Differentiating Thorax levels

Now that you are comfortable and more skillful with the arm reach and thorax side bend on your side, you can now differentiate levels along the thorax. In Figure c, whilst reaching using all of the thorax, your attention goes to the middle of the thorax. You can emphasize this level more than the rest. Go gently and small. Visualize the vertebrae and ribs moving. in the section of the thorax. Similarly, you can emphasize bending of the upper thorax levels (Figure d).

e. leg reach - pelvis and lumbar spine

f. leg & arm reach - the entire spine



Arm and Leg Reach on Side

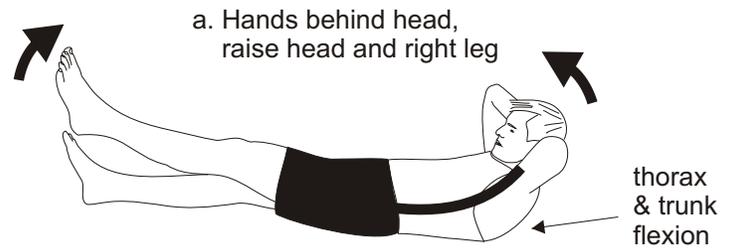
To make this action more of a whole trunk action we can add reaching with the leg. So again on your right side, reach your right leg down away from you. Push your left heel away from you. To do this you will feel the pelvis rotate and the low back bend (Figure e). Again this action is a lifting of the right side away from the floor, this time lifting the right low back (Figure e- small arrow). Go gently, deliberately and slowly. Don't force it.

Figure f. Now reach with the arm and leg at the same time. Hence the entire length of your spine is lengthening on the left side and shortening and lifting on the right (small arrows). Go skillfully, seek an even use of each level of the spine to achieve this action. This is good spinal action. There is an even spread of load and effort and all you need for stability.

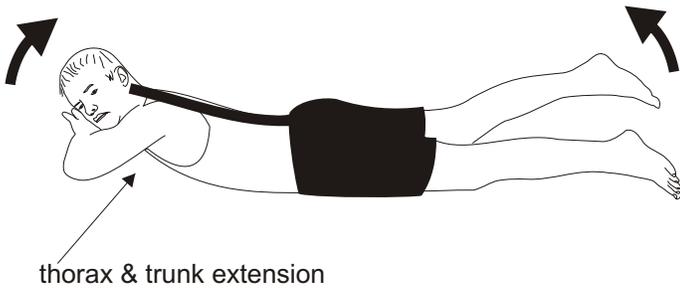
EXERCISE YOUR THORAX

Raising Head & Leg

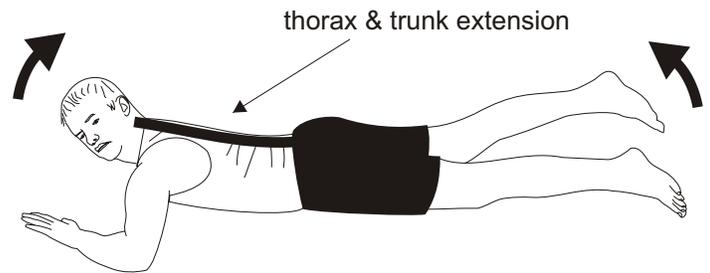
The following exercises all involve raising your head and leg at the same time (Figure a-d). The diagrams are self explanatory. For figure b-c repeat with the head turned the other way and raise the opposite leg. In figure d, repeat on the opposite side. The hands & arms support the head and don't pull on or jerk on the neck. These exercises connect the head and neck to the thorax, trunk, pelvis and legs and are one mechanism to invoke, study and incorporate thorax motion in your action.



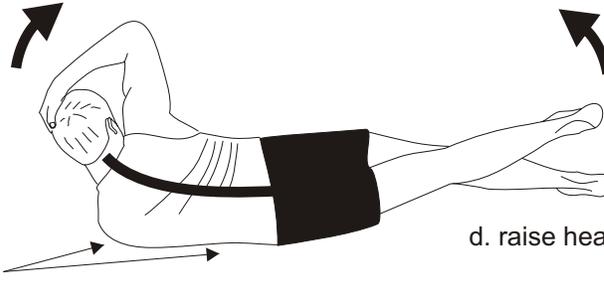
b. Right cheek on left hand, raise hand, head and elbow with right leg



c. raise head and right leg



thorax & trunk side bend/lengthening



**IF YOU ARE IN PAIN,
CONSULT YOUR DOCTOR BEFORE DOING THESE EXERCISES .
ALWAYS GO SLOWLY AND GENTLY.
REMEMBER THESE ARE EXERCISES FOR LEARNING.**

Exercises and Exercising

Mindful movement of your spine and thorax will bring greater freedom. As well as exercises for your thorax, exercising vigorously also challenges, expands and frees thorax function. Fast walking, running swimming, cycling, sports and any exercise that raises the heart rate to training levels (70% of maximum) will also help keep the chest mobile. Classes in the Feldenkrais Method, Tai Chi, Alexander Method and Yoga are all excellent body awareness and freeing activities.

Advanced Thorax Awareness & Dexterity

see page 182 & 188 "A Guide to Body Sense"



References:

Burgess 2009 "A Guide to Body Sense" www.efeld.com

Next Issue:

Posture & Posturing.