



# ***THEWS***

## ***Application of the exercise protocol***

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# What is the issue to be addressed?



While sitting, office workers, tend to lean forward or to slouch down in the chair. This partial immobilization can cause low back pain or neck pain because static posture increases stress on the back, neck, shoulders, arms and legs.

Neck/back pain or upper limb disorders remain the most common occupational diseases in the European Union long-term sickness absence.

**Every one has to “pay attention”  
to its body pain signal !**



**Pain occurrence = That's a problem...!!!**



**A systematic review on economic evaluations investigated the cost-effectiveness of conservative treatments for non-specific neck pain and they found that therapeutic exercise was the most cost-effective therapy for non-specific neck pain patients.**



- **Exercise suitable for your symptoms**
- **No special outfit or equipment**
- **Perform seated**
- **After some practice you will be able to execute it properly!**

**What is the solution?**

***THEWS***

***means muscular strength!***

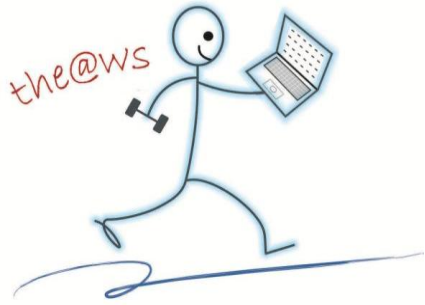




## Bad posture leads to :

- Weak muscles
- Tight muscles
- Stiff joints
- **Muscle pain !**





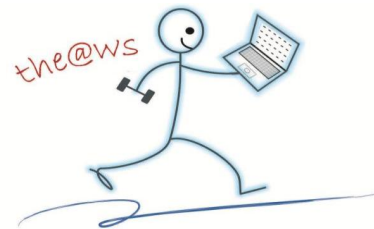
# THEWS goals !

- Decrease neck and upper back pain area
- Achieve normal range of motion
- Proper sitting and standing position adaptation
- Improve muscle elasticity
- Improve muscle strength
- Improve functional ability at the work space



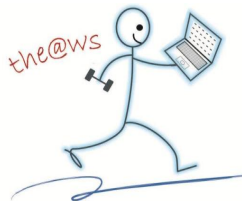
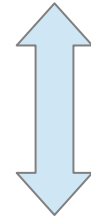
# Types of exercise

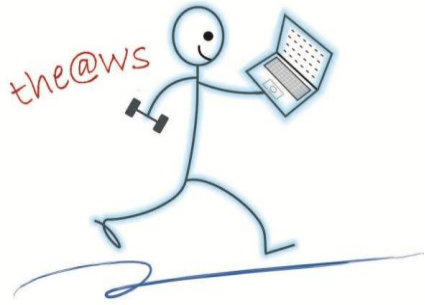
- Proper relaxation techniques- Breathing
- Proper position's (sitting and standing) adaptation exercises
- Stretching exercises
- Strength exercises
- Functional exercises (proprioception and function)



# Exercise sequence...!!!

- First, relaxation techniques.
- **Next, perform positioning exercises.**
- **Then, stretching exercises.**
- Simple strengthening exercises.
- After combination of stretching & strengthening exercises.
- Finally functional exercises in workspace.





# THEWS protocol goals !

- Achieve normal range of motion
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# Types of exercise

- Proper position's (sitting and standing) adaptation exercises
- Stretching exercises
- Strength exercises
- Functional exercises



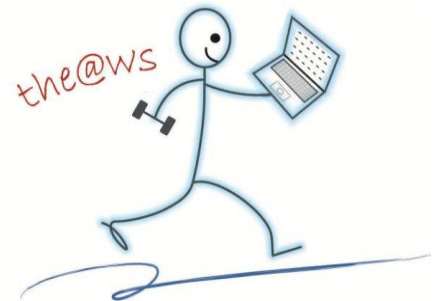
# Some rules of **progressiveness**.....

- First, relaxation techniques.
- Next, perform positioning exercises.
- Then, stretching exercises.
- Simple strengthening exercises.
- After combination of stretching & strengthening exercises.
- Finally functional exercises in workspace.



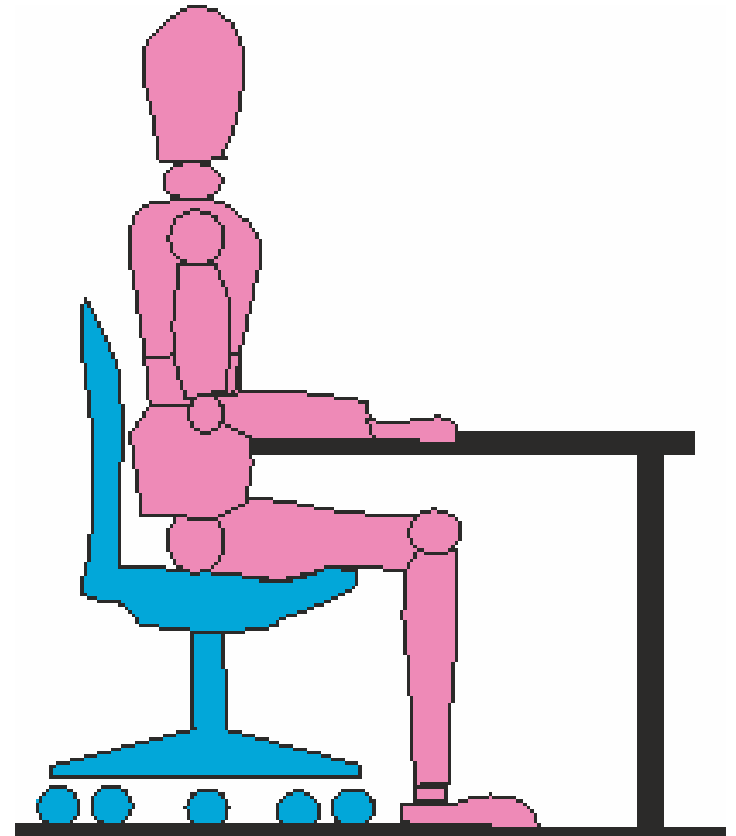
# First, **relaxation** techniques !

- Small improvement in decrease of pain in some cases when they applied relaxation techniques (psychogenetic pain !) (*Misailidiou 2012*)



# Next...Positioning exercises (Segmental muscles).

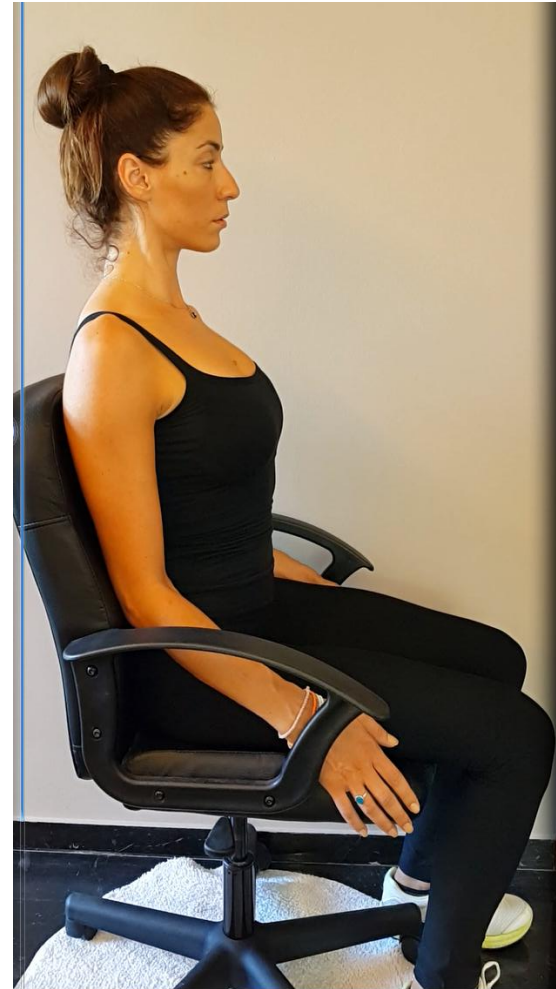
- Activate the segmental muscles so someone can tolerate the proper sitting or standing position for a period of time.



# Perform positioning exercises (Segmental muscles)

## Sitting position

- Roll the pelvis forward to create a normal lumbar lordosis
- Lift the sternum, so the shoulders fall back into a neutral position.
- Tuck the chin as if making a double chin and lift the head while maintain the chin tuck.
- Hold for 10 sec and relax. Repeat.

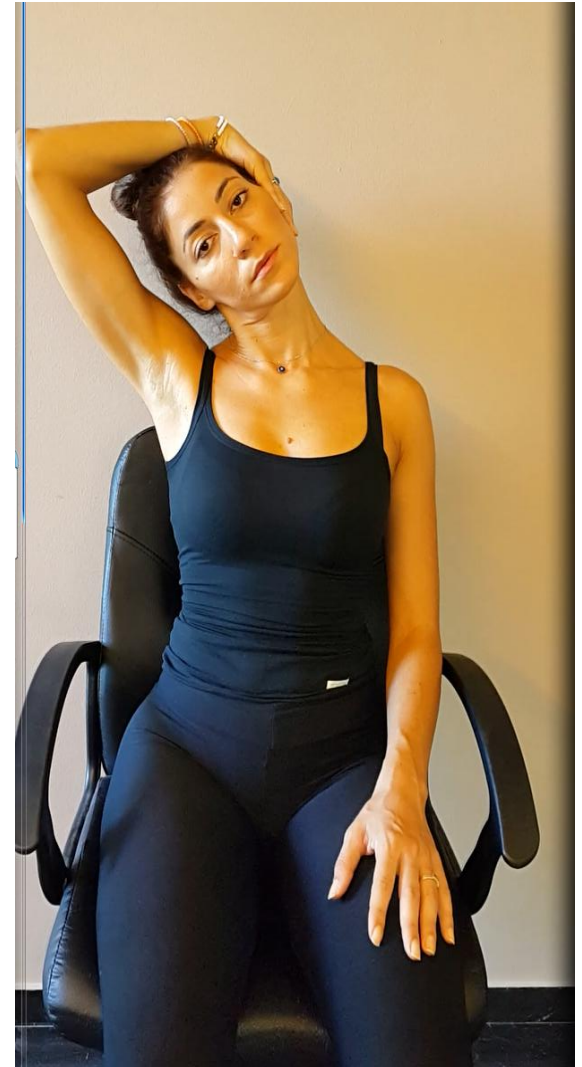


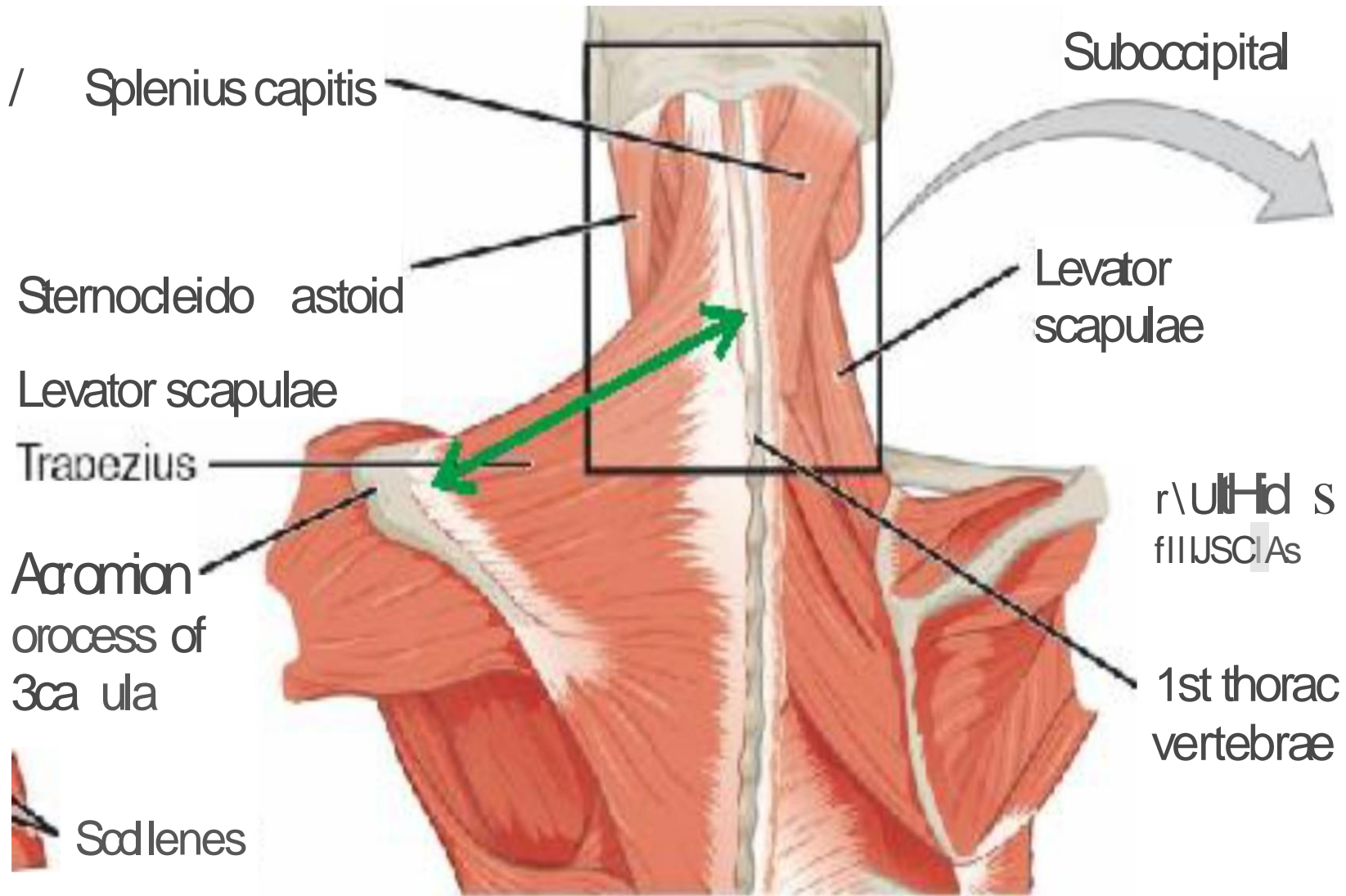


# Then, stretching exercises.

## Lateral neck flexors muscles' stretching

- Sit properly.
- Hold your upper back on the chair (your scapulas touch the chair).
- Place your arm over your head and touch with your hand the other side ear.
- As you hold this position, bend laterally your head while you help with your same side arm pushing your hand to increase the stretch.
- Feel a stretch on the other side of the neck. Hold it for 12 s.
- Return to the initial position, and repeat to the other side.





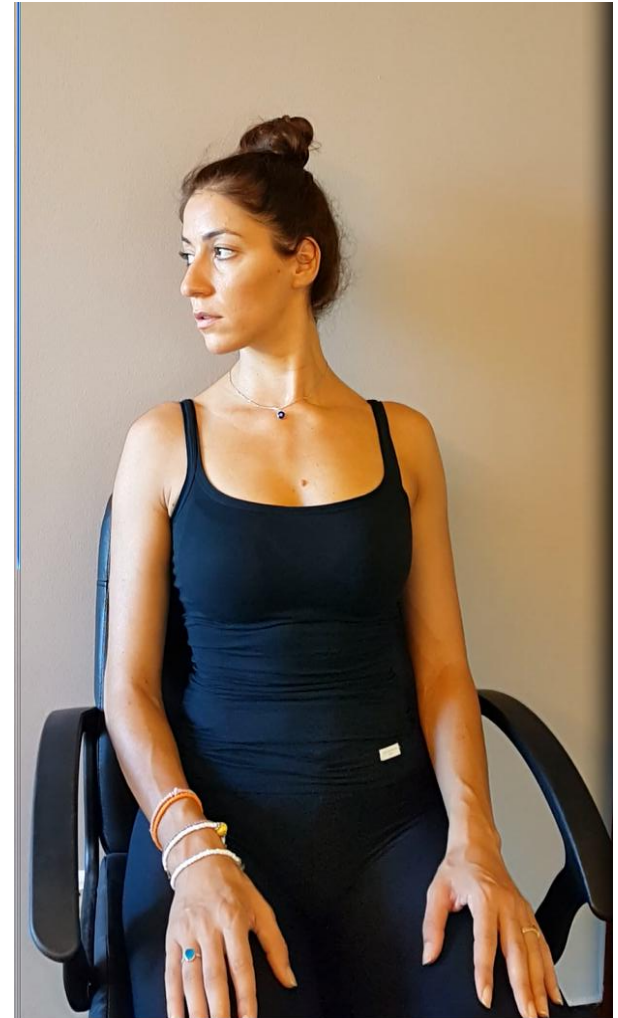
Superior neck muscles:  
 right side Trapezius removed  
 (1st thoracic vertebra)

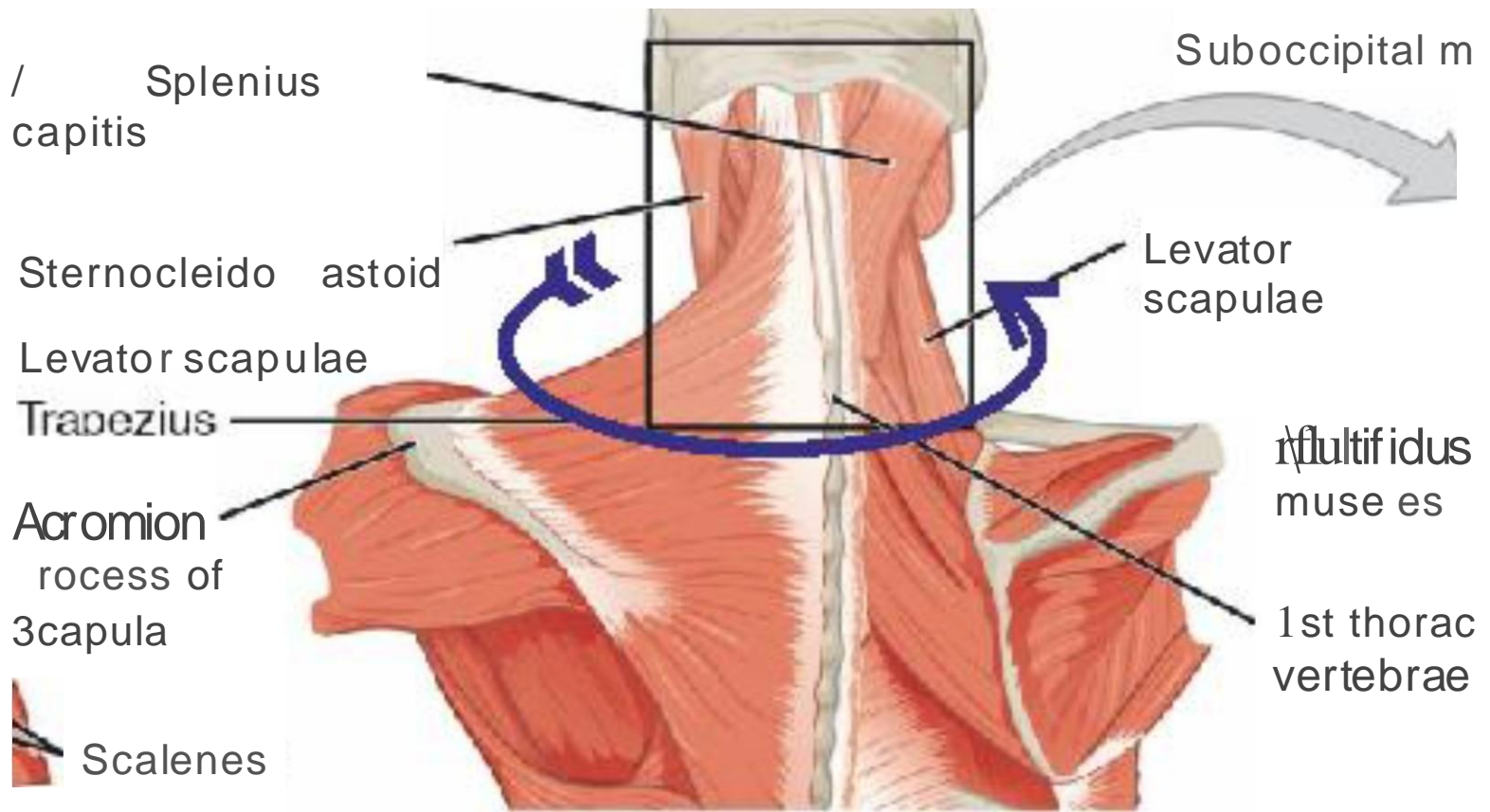
# Then, stretching exercises.

## Rotator neck muscles stretching

Sitting position (as we mentioned before)

- Sit properly.
- Hold your upper back on the chair (your scapulas touch the chair).
- As you hold this position, rotate your head.
- Feel a mild stretch on the back side of the neck. Hold it for 12 s.
- Return to the initial position, relax and repeat to the other side.





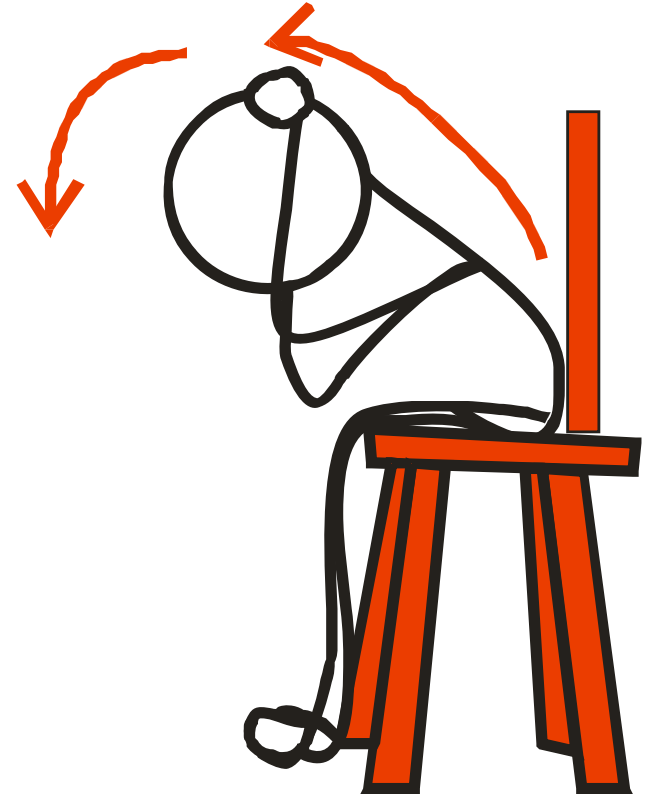
Superficial neck muscles -  
 right side. Trapezius removed  
 (Posterior view)

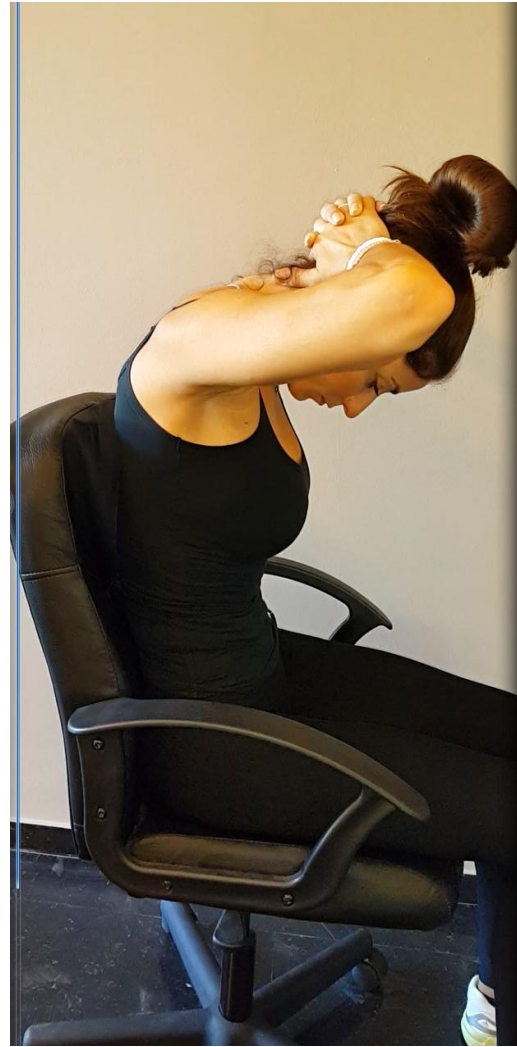
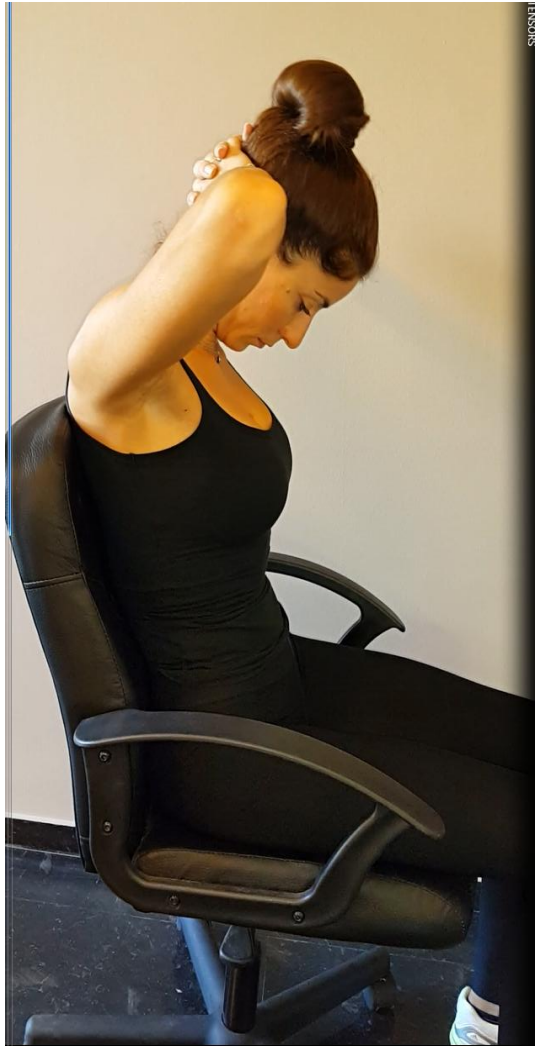
# Then, stretching exercises.

## Neck extensors muscles' stretching

Sitting position (as we mentioned before)

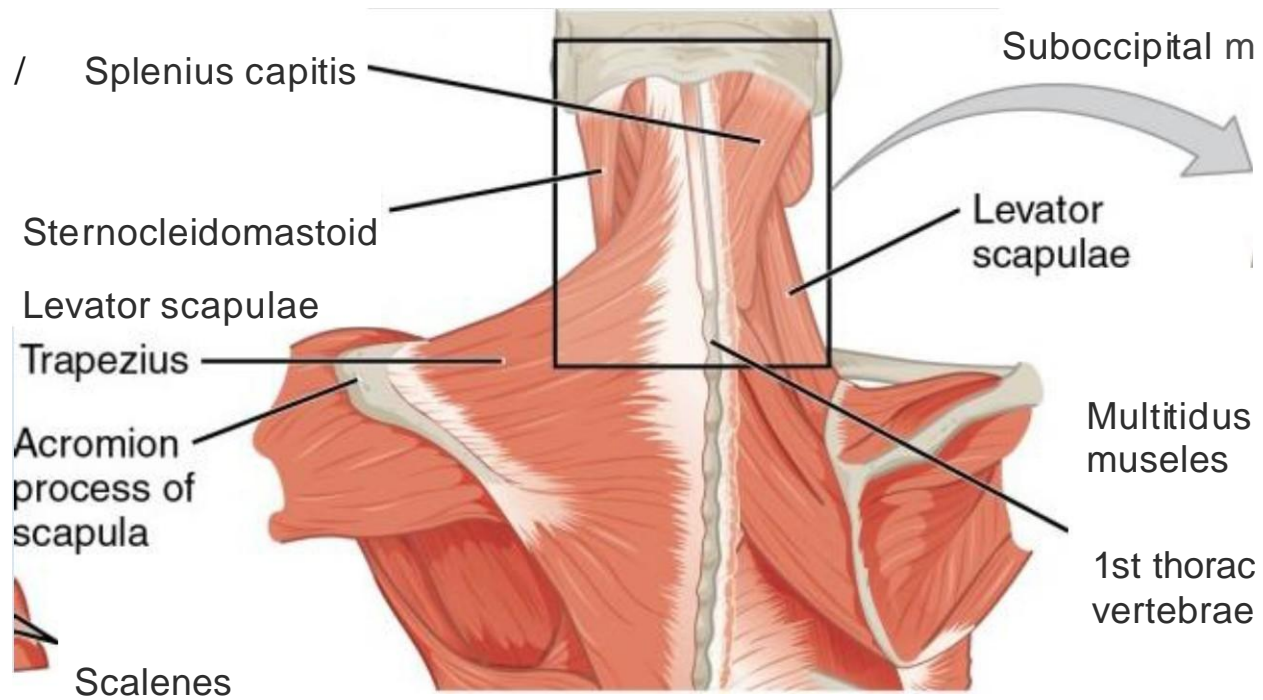
- Sit properly.
- Hold your upper back on the chair (your scapulas touch the chair).
- Place your hands over your head.
- Flex gently your head while you feel a mild stretch on the back side of the neck.
- Hold it for 12 s.
- Return to the initial position, relax and repeat.





13/2/2017

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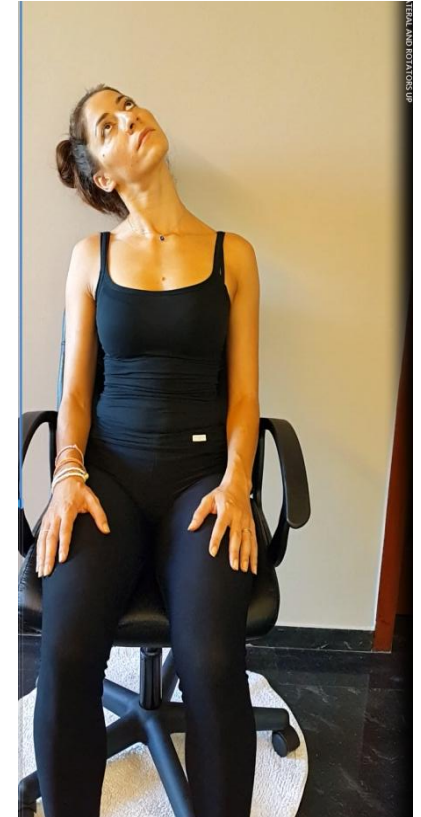
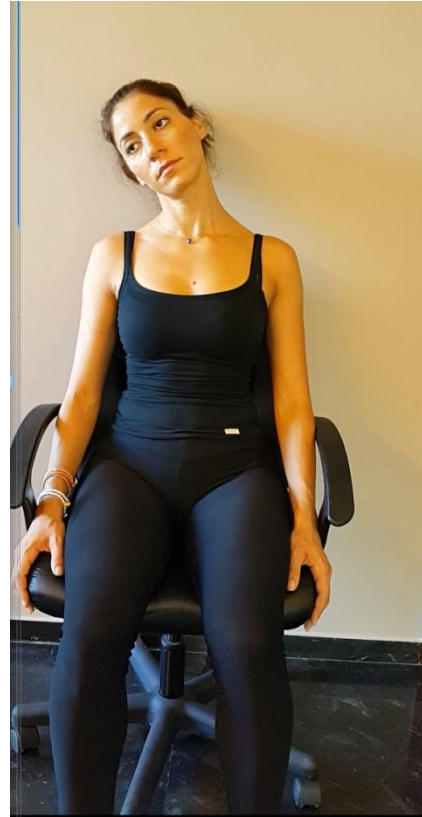
Superficial neck museles:  
 right side trapezius removed  
 (posterior view)

# Then, stretching exercises.

## Lateral flexors and rotator muscles of the neck stretching

Sitting position (as we mentioned before)

- Sit properly.
- Hold your upper back on the chair (your scapulas touch the chair).
- As you hold this position, bend laterally your head.
- Feel a mild stretch on the other side of the neck.
- Then rotate your head to the other direction so you can try to look at the ceiling.
- Feel a mild stretch and hold it for 12 s.
- Return to the initial position, and repeat to the other side.







# Then, stretching exercises.

## Thoracic muscle stretching I.

Sitting position

- Rotate your torso while your low back is still on the chair.
- Keep your upper back in upright position (scapulas close) when is rotating.
- Feel the stretch in the lateral area of the torso and hold it for 12 s.
- Return to the initial position, and repeat to the other side.



# Then, stretching exercises.

## Upper back muscle stretching

### Sitting position

- Place your arms in front of your chest and hold your fingers together.
- Then turn your arms inwardly and try to push away while your scapulas are stocked on the chair.
- Then elevate your hands over your head as far as you can and hold it for 12 s.
- Feel the stretch in the back area of the torso and arms.
- Return to the initial position, and repeat to the other side.



# Simple strengthening exercises.

## Scapulas adduction muscle isometric activation

### Sitting position

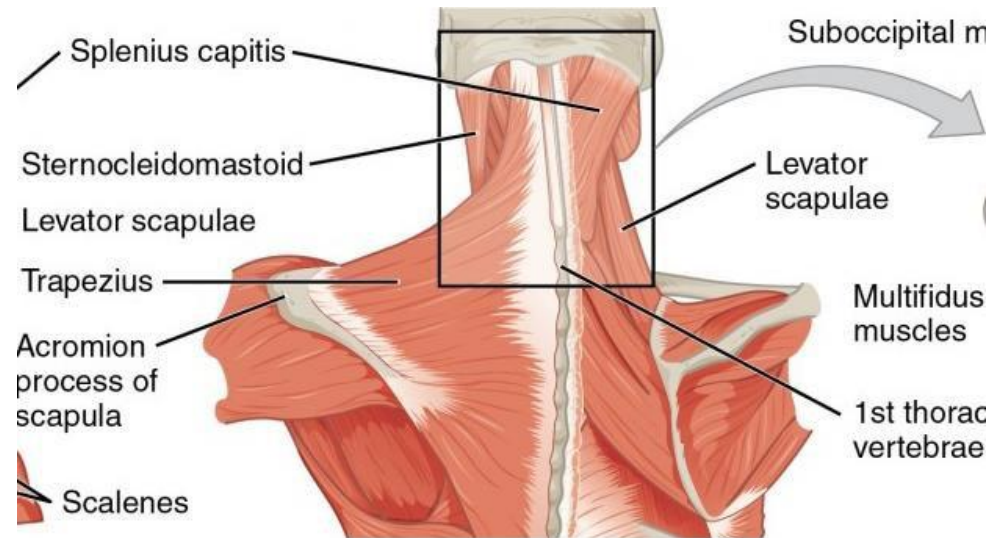
- Roll the pelvis forward to create a normal lumbar lordosis
- Lift the sternum, so the shoulders fall back into a neutral position in contact with the chair.
- Bend your elbows in 90 degree flexion.
- Tuck the chin as if making a double chin and lift the head while maintain the chin tuck.
- Push your shoulders and arms against to the back of the chair..
- Hold it for 12 s.
- Relax and repeat.



## Scapulas adduction muscle isometric activation

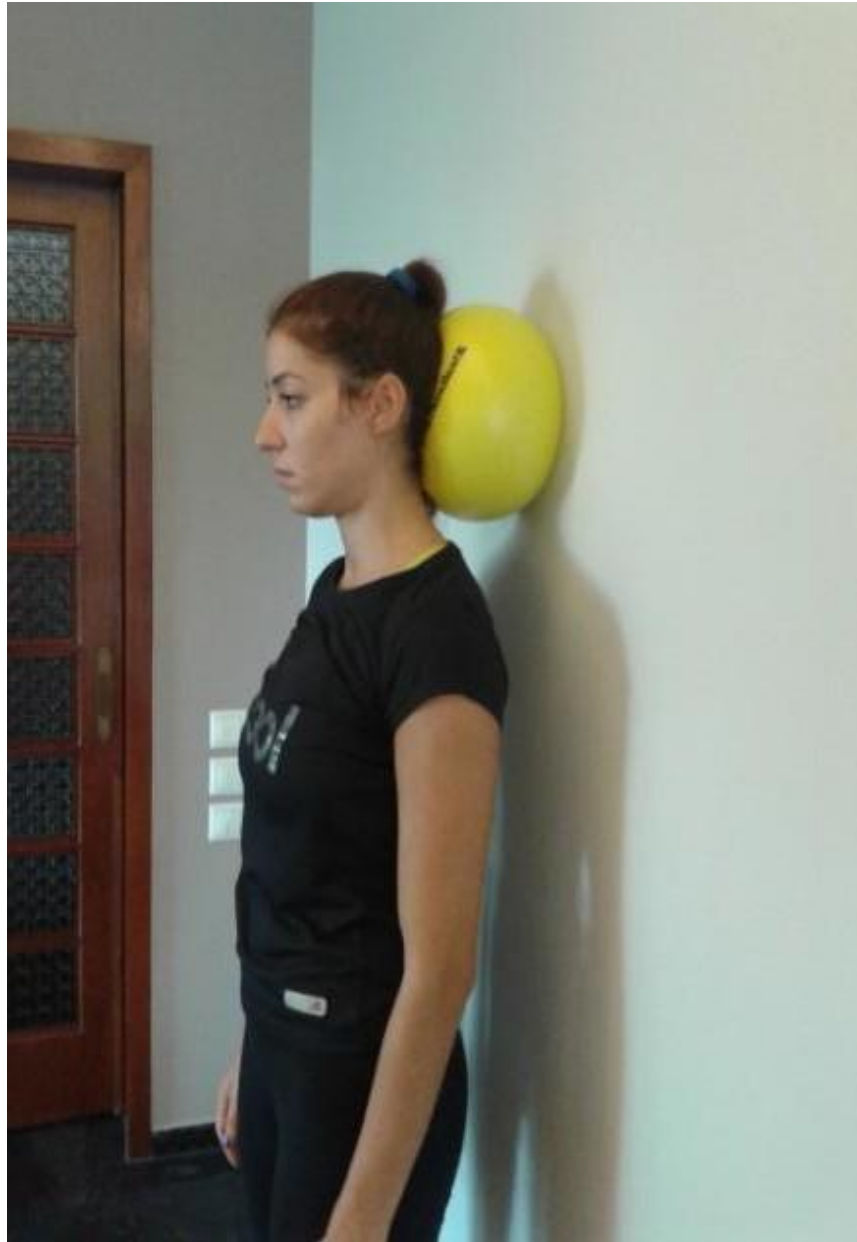
### Sitting position

- Roll the pelvis forward to create a normal lumbar lordosis
- Lift the sternum, so the shoulders fall back into a neutral position, slightly in front of the chair.
- Tuck the chin as if making a double chin and lift the head while maintain the chin tuck.
- Bring your scapulas together (shoulders back) as much as you can.
- Hold it for 12 s.
- Relax and repeat.



Superficial neck muscles:  
right side trapezius removed  
(posterior view)

# Simple strengthening exercises.

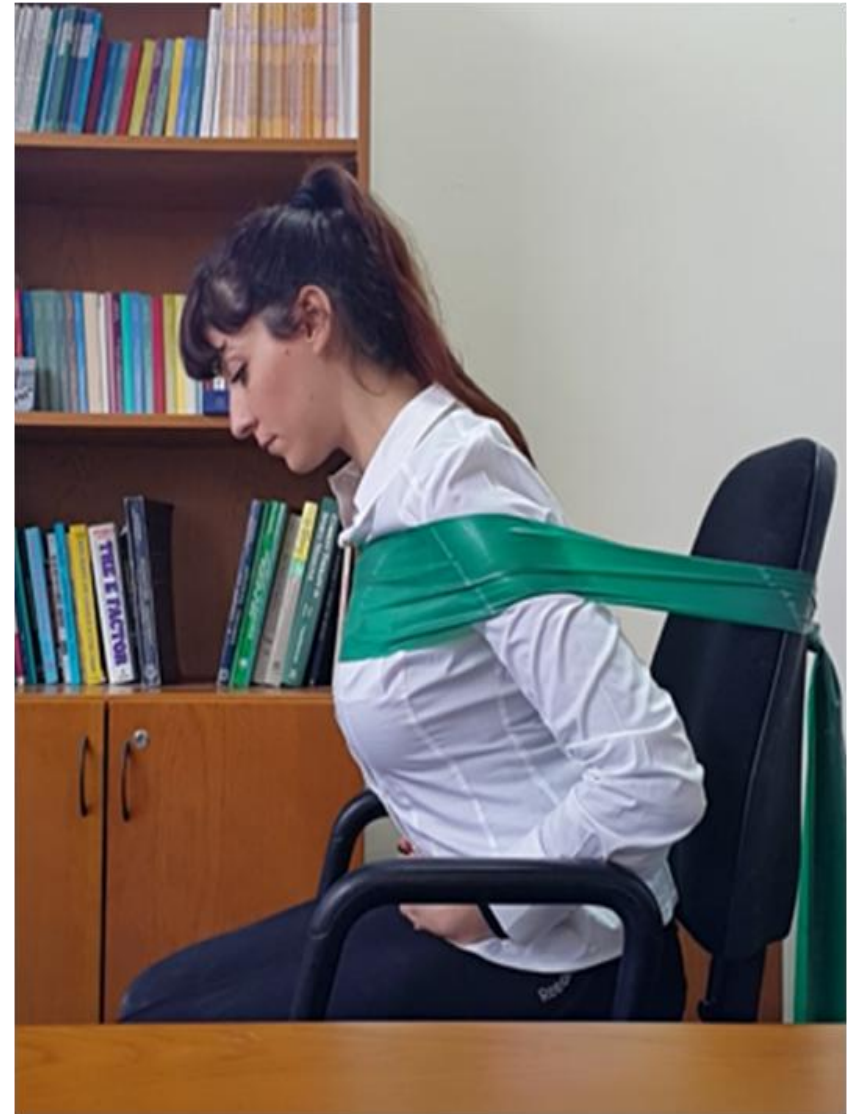


# Simple strengthening exercises



## **Thoracic muscle strengthening and stretching exercises combination**

- Use an elastic band to make a loop and place it around your chest and your chair's back.
- Push the band forward with your shoulders while you bend your extended torso (hip flexion).
- Hold for 10 seconds.
- Relax gradually as the band pulls your shoulders backwards. Feel the stretching of your thoracic muscles.
- Hold for 10 seconds.

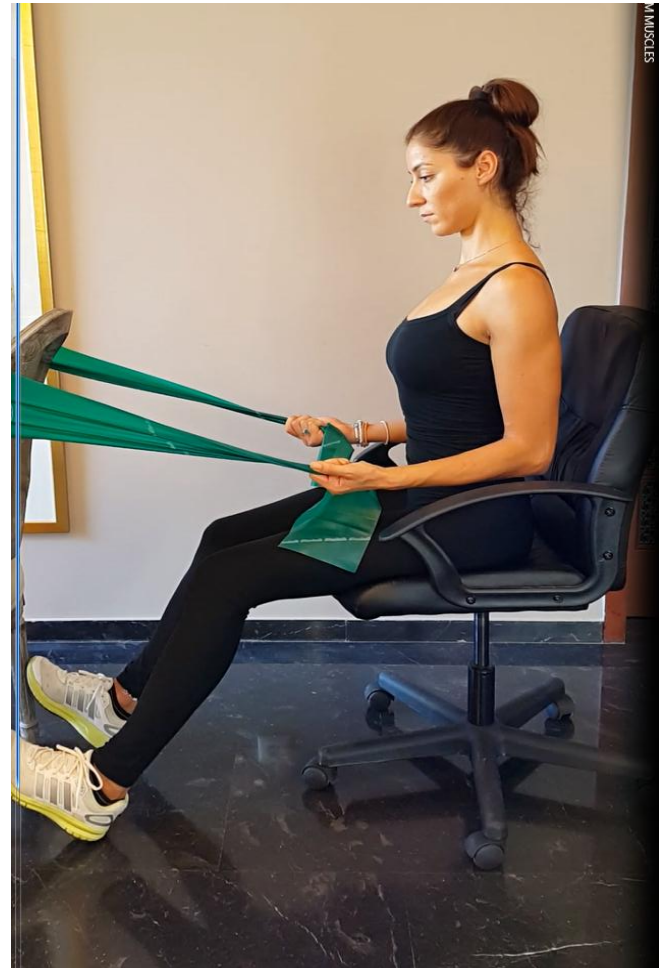




# Functional exercises.

## ....Muscle back strengthening and stretching exercises combination.

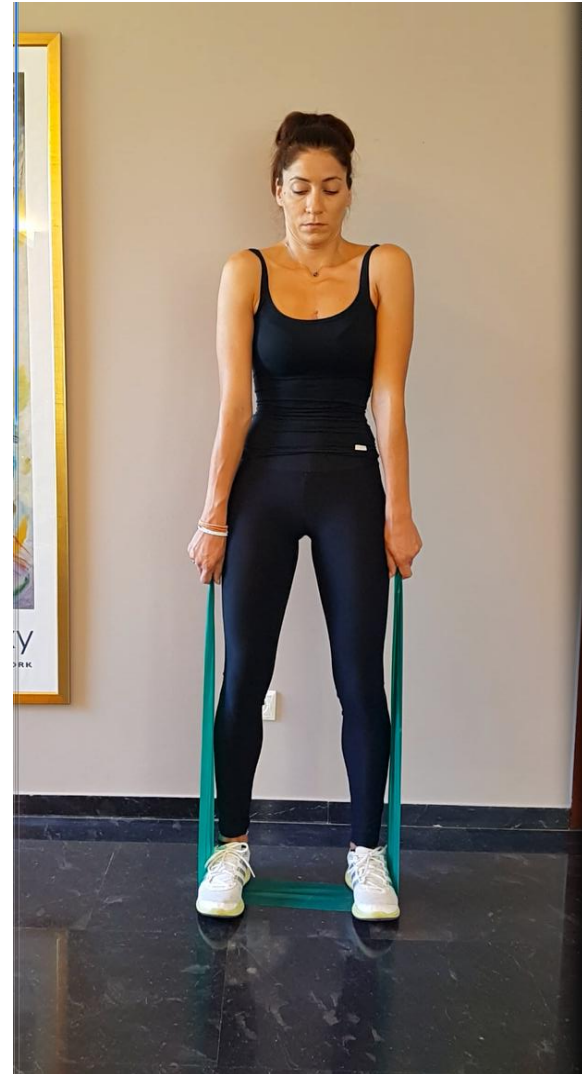
- Tuck the chin as if making a double chin and lift the head while maintain the chin tuck.
- Pull the band with bended elbows and adduct your scapula as far as you can while you rotate your forearms outwards.
- Hold it for 12 s.
- Slowly relax gradually as the band pulls you in forward way while you rotate your forearms inwards.
- Feel the stretch in your upper back and shoulders muscle area.



# Functional exercises.

## ....Functional strengthening-stretching exercise

- Bend slightly your knees.
- Rotate your shoulders backwards slowly trying to do a circle path.
- Stop when your shoulders are in front of your body line.
- Keep this position and feel the thoracic muscle for 12s.
- The slowly rotate backwards and stop when your shoulders are in back of your body line.
- Keep this position and feel the thoracic muscle stretching for 12s.
- Return slowly to initial position and repeat.



# Functional exercises.

## ...Functional strengthening-stretching exercise for triceps and back

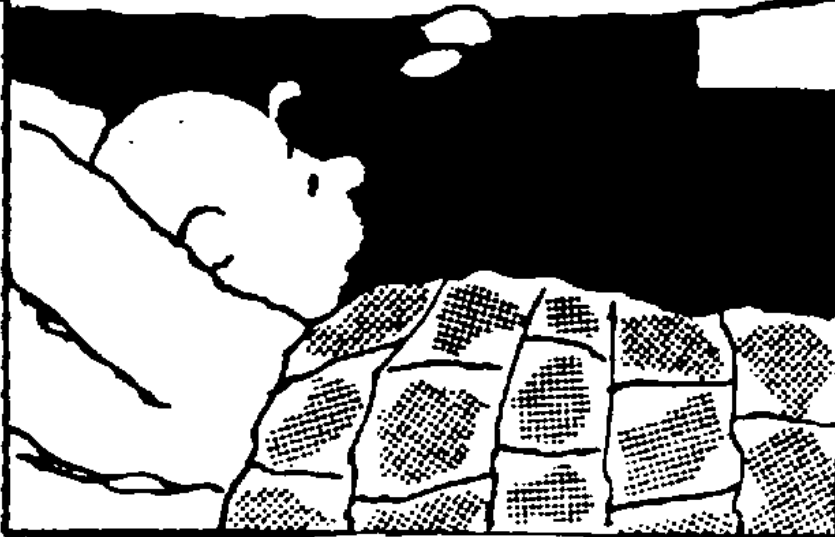
- Tuck the chin and finally lift the head while maintain the chin tuck, pelvis tilt with the head in slightly flexed position.
- Bend slightly both knees.
- Feel the stretch in you chest and shoulders.
- Hold this position for 12s.
- Push the band over your head.
- Keep this position and feel the thoracic muscle for 6s.
- Relax and return slowly to initial position and repeat.



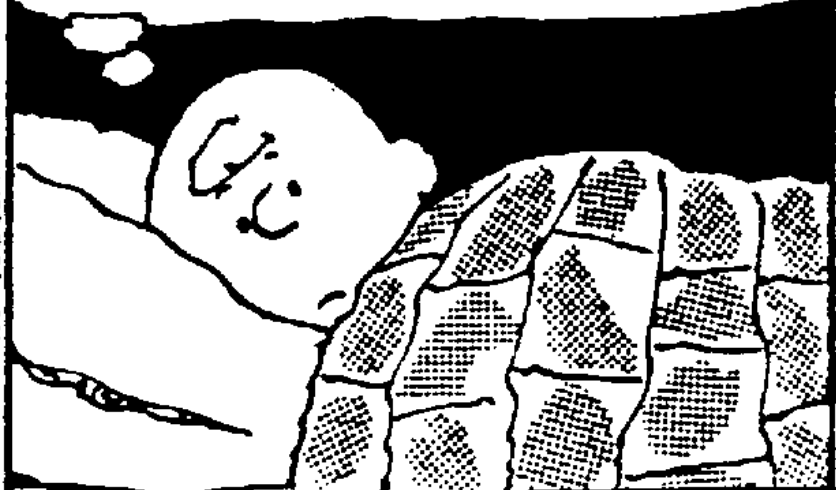
# The meaning of Life ?

PEANUTS

SOMETIMES I LIE AWAKE AT NIGHT, AND I ASK QUESTIONS..



IS THERE ANY ONE THING A PERSON CAN DO TO MAKE HIS LIFE SUCCESSFUL?



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# The control of stability dysfunction !



# Continue with the “Handbook for experts”!

