

BACK SCHOOL

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A flexibility training program is a planned, balanced and regular exercise program that increases in a permanent and progressive way the amplitude of an articulation or a whole of articulations during a certain period of time.

This course wants to provide the patient with some concepts regarding stretching and relaxation techniques. It will go by body parts, meaning different parts of the body will be treated in each session in the following order: :

- 6 stretching sessions
- 6 relaxation sessions
- 2 position rehabilitation sessions
- 1 ergonomics sessions

Obviously the course may vary in function of the specific needs.

We will now show you the stretch sessions. We are currently developing the sessions for relaxation, position rehabilitation and ergonomics.

STRETCHING SESSIONS

1st SESSION

In this first sessions we try to explain the guidelines for correct stretching. We will start with the LUMBAR area, explaining the different exercises that exist for stretching of the lumbar, ischiotibial and loin muscles.

2nd SESSION

We repeat the LUMBAR area introducing new stretching exercises (ischiotibial, lumbar and psoa muscles)

3rd SESSION

We continue with the LUMBAR area but combined with strengthening exercises for the abdomen and the buttocks. It is important to introduce the concept of the 'pendant pelvis'.

4° SESSION

During this session we will start stretching the muscles of the CERVICAL and DORSAL area (Trapeze, angular, ECM, ...)

5° SESSION

Repeat the CERVICAL and DORSAL area.

6° SESSION

During this session we will try to introduce concepts of strengthening for those backs that suffer from muscular contractiosn because of muscular weakness.

What's the use of introducing stretching exercises in a training program for relaxation techniques?

One of the most important advantages of a flexibility program is the induction towards relaxation. From a merely physiological point of view, relaxation occurs when the muscular contraction comes to an end. An excessive muscular tightening translates brings along various negative effects. It is also a waste of energy, because obviously a contracted muscle needs more energy than a relaxed muscle. This is why persons suffering from muscular contractions experience more physical tiredness.

Does stretching relieve the pain? Every day experience and investigation show that gradually built up stretching exercises reduce and sometimes even eliminate muscular pain.

What methods should I follow in order to stretch correctly?

Most programs recommend each stretching movement to take from 6 upto 12 seconds. Others however recommend holding on a stretching movement for 10 upto 30 seconds. According to Bates (1971) a stretching movement has to be maintained during 60 minutes in order to increase and maintain the flexibility.

There also exist different opinions regarding the frequency and the amount of times the movement should be repeated. Each person should however experiment in order to find out what is the best for him or herself. The best time to perform the exercises is early in the morning in order to get rid of the morning rigidity and when one decides to work out twice a day it should be early in the afternoon or after work.

We will now go into the details of the exercises of each back school session.

SESSION 1

Ex.1 Stretching of the hamstring muscle and the muscles of the lumbar area

While seated on the floor, bend your left knee and let your heel slide towards your buttocks. Stretch out. Keep the left leg stretched and bend your waist. Let the upper part of your chest rest on your thigh.



Ex. 2 Stretching of the hamstring muscle.

While lying on your back, pull up your hips and your knees. Lift your right leg until the knee is completely flat. Stretch. Change legs.



Ex.3 Stretching of the hamstring muscle

While seated on the floor, with both legs flat and separated, exhale maintaining both legs flat on the floor and lift up the upper part of the back, bend your waist forwards and let your chest rest on the left leg. Change legs.



Ex. 4 Stretching of the hamstring muscles and the lumbar muscles.

While lying on the floor, put your legs against a wall in a 90° angle. Make sure your buttocks touch the wall and that the lumbar area rests on the floor. Exhale while stretching your legs against the wall.



Ej 5 Lumbar stretching.

While lying on the lumbar area, get into the 'foetus position', trying to lift your knees against your chest. Maintain position.



Ej 6 Lumbar stretching.

While lying on the floor with your knees and hips bent, put your right foot on top of your left knee and push the knee against the floor. Put your hands under your head. Stretch.



Ej 7 Lumbar stretching.

Seated in a chair or on the floor, exhale while bending your chest over your legs, until your belly touches your legs (if you're seated). Maintain the position.



Ej 8 Lumbar stretching.

Seated on the floor with your legs open, put your hands together behind your head with your elbows in the air. Exhale and incline your chest to one side, trying to touch the floor with your elbow. Maintain the position.



SESSION 2

Ex. 1 Stretching of the lumbar psoa

Kneel down on your left leg with your right leg in a bended position and with your foot flat on the ground. Bend your hips slightly forwards until you feel the muscles in your left thigh stretching. Maintain the position. Repeat with the right leg.



Ex. 2 Stretching of the lumbar psoa and the quadriceps.

Same position as in the previous exercise but we take the left foot and we lift it against our buttocks. Maintain the position. Repeat with the right leg.



Ex. 3 Stretching of the lumbar psoa.

Seated on the floor with both legs straightened: pull your right leg up backwards. Exhale and slowly bend your

back backwards until your elbows touch the floor. Maintain the position. Repeat with the other leg.



Ex. 4 Lumbar stretching.

While lying on the floor with your legs straightened, lift your right knee against your chest. Maintain the position. Repeat with the left leg.



Ej 5 Stretching of the rotative muscles of the hips

Lying on the floor with your legs stretched, bend your right leg towards your chest. Touch the right knee with your left hand and push it to the left. Maintain the position. Repeat with the left leg.



Ex.6 Stretching of the rotative muscles of the pelvis.

Standing up with your left knee half bended. Cross your right leg behind your left leg. Bend your chest forwards maintaining the knee in its bended position. Let your arms hang to increase in the intensity.



Ex. 7 Lumbar stretching (and abdomen strengthening)

Lying on your back with your arms on your chest and your knees bended. Push your back against the floor, contracting the abdomen muscles. Maintain the position.



Ex. 8 Lumbar stretching

Lying on the floor, put your hips and knees in a 90° angle by putting your feet against the wall. Push your feet against the wall and maintain the position.



SESSION 3

Ex. 1 Abdominal strengthening and stretching of the psoas.

Lying on your back; pull up your right knee against your chest while maintaining the left leg straightened. Maintain the position and change leg.



Ex. 2 Strengthening of the lower abdomen.

Lying on your back, lift your legs and pull up your knees. Repeat the amount of times indicated. EXhile when bringing the knees towards the chest.



Ex. 3 Strengthening of the lower abdomen.

Lay on your back at about 50 cm of the wall and let your feet rest against the wall. Take your feet of the wall maintaining them together. Repeat 20 times in 3 series.



Ex. 4 Pendant pelvis

Lay on back with your legs and knees slightly bended. Try to push your lumbar area against the floor performing a pendant pelvis. Maintain the position.



Ex. Pendant pelvis

Stand on your two feet near a wall against which you can rest your back. The two feet, put together, must be a bit removed from the wall. Perform the pendant pelvis. Maintain the position and relax.



Ex. 6 Strengthening of the buttocks.

While lying on your back, pull up your hips and knees. Lift your hips off the floor until you feel the muscles of the buttocks contract. Note: do not lift your hips too high – it can increase the lumbar lordosis. Repeat 20 times in three sessions.



Ex. 7 Strengthening of the buttocks.

While lying on your belly with a pillow underneath, lift your right leg. Change legs until you have repeated each leg 20 times.



Ex. 8 Buttocks strengthening. (Chilaiditi movement)

Sitting on your hands and knees, inhale to the maximum and blow up your abdomen. Exhale contracting the abdomen muscles. Maintain.



SESSION 4

Ex. 1 Stretching of the trapezius muscle and annex muscles.

While kneeling down, put your hands behind your back. Take your left wrist in your right hand and incline your head to the right. Maintain the position.



Ex. 2 Cervical stretching.

Lying on the floor with your knees pulled up, put your hands behind your head. Exhale and lift your head off the floor and towards your chest. Maintain the position and relax.



Ex. 3 Cervical stretching.

While sitting down, bend your head trying to touch your chest with your chin. Maintain the position. Note: in order to stretch further, the patient can put his hands behind his head and force forwards with the weight of the arms.



Ex. 4 Cervical stretching. Double chin exercise.

While lying on your back with your head on the floor, try to 'pull out your double chin', pushing your chin towards your chest, but always keeping your head against the floor (it should not be lifted from the floor).
Note: if you have a considerable posterior shortening, put a pillow underneath the head.



Ex. 5 Dorsal stretching

Sitting on your hands and knees, stretch your arms out until your head sits between your shoulders. Sitting in this position, try to make your chest touch the floor. Maintain the position. Note: the head should not touch the floor.



Ex. 6 Dorsal stretching.

Sitting on your knees, put your hands against a wall about 50 cms away, thusly forming a 90° angle. Bend your chest towards the wall. Maintain the position.



Ex. 7 Stretching of the dorsal muscles.

While standing up, with the knees slightly bended. Put your hands together behind your head. Try to make your elbows touch as much as possible in front of you. Maintain the position.



Ex. 8 Stretching of the dorsal muscles.

Standing up with your legs slightly opened and your hands put together above your head. Expire. Put your ear against your shoulder and slowly lower your arms laterally. Maintain the position. Note: contract the muscles of the buttocks.



SESSION 5

Ex. 1 Dorsal stretching

Standing up with your feet together, forming a 90° angle with the floor and with your arms above your head.

Exhale. Maintain your arms and legs straightened, straighten your back and put your hands on the support surface. Extend your shoulders and push against the support surface in order to form an arch with your back. Maintain.

Ex. 2 Dorsal stretching

Kneeling down, pull out your left leg to one side, maintaining it in line with the left knee and stretching your left arm. Exhale. Incline the hips to the right. Lower your right hand to your right foot and stretch your left arm over your left ear. Maintain position.



Ex. 3 Dorsal stretching.

Let yourself hang from a bar situated above your head. Slowly let your body hang without overstretching your arms.



Ej 4 Stretching of the pectoral muscle

Lying on your back, put your arms in a 90° angle (chandelier position). Push your arms against the floor until you feel the muscles stretching. Maintain the position.



Ex. 5 Pectoral stretching

Sitting down with your back against the wall, put your hands together behind your head. The elbows must be pressed against the wall. Maintain the position.



Ex. 6 Pectoral stretching

While lying on your belly, your arms spread, lift your arms off the floor until you feel the pectorals stretching. Maintain the position.



Ex. 7 Pectoral stretching.

Sitting on your hands and knees, lift your right arm up by turning your chest to the right until you feel the muscles in the pectoral area stretching. Maintain the position.



Ex. 8 Pectoral stretching

Sitting down, stretch your arms and elbows behind your back. Maintain the position.



SESSION 6

Ex.1 Cervical strengthening.

Lying on your back, in a relaxed position, perform the double chin exercise but this time push your head back against the floor in order to provoke an isometric contraction of the lower muscles. Contractions of 6" with 15 - 20 repeatings



Ex. 2 Cervical strengthening.

While sitting down, hold a stick in your hands behind your head. Lift the stick until your arms are completely stretched. Note: perform 3 series of 20 movements.



Ex. 3 Dorsal strengthening.

Lying on your backs with your arms spread, lift your hands a couple of centimeters off the floor. Note: you can perform the exercise with weights of 1 kilo strapped around your wrists.



Ex. 4 Dorsal strengthening

Lying on the floor with your arms against your body and holding weights of 1 kilo in your hands. Lift your hands of the floor in extension of your shoulders (elbows completely straightened) while at the same time lifting your head off the floor. Repeat in 3 series of 20 movements.



Ex. 5. Strengthening of the scapulas

Sitting down and holding a stick (shoulders in a 90° angle). Try to bring the scapulas together. Perform 3 series of 20 movements.



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