

A person is shown from the back, performing a Pilates exercise. They are holding a long wooden bar with both hands, arms extended upwards. They are sitting on a large blue exercise ball. The person is wearing a black tank top and patterned leggings. The background is a solid grey color.

BACK PAIN RELIEF EXERCISES

PILATES BY OLIVIA



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Before starting any exercises remember to check with your doctor.

The exercises presented in this booklet are low impact exercises that may prevent and ease back pain. The training is focused on your deep abdominals and glutes strengthening and also gentle stretch and mobilization. To get the most of it, please note that the core engagement, the lateral thoracic breathing pattern and the control of the spine is recommended.

Main pilates principles in a nutshell.

Core engagement

While doing pilates the core engagement is crucial so before you start, take a moment to learn and understand how to do this correctly. We activate it by bringing the navel to the spine (drawing the belly in).

Imagine that you are putting on the tight pair of jeans, trying to zip them. To do so, you need to pull in your lower belly. Try this and you should feel engagement in that area and your abdominals should flatten and feel firm and strong.

Pelvic floor muscles support our internal organs. They stretch like a muscular hammock from the tailbone to the pubic bone and from one sit bone to the other sit bone. When weakened, the internal organs are not fully supported and we may have difficulty controlling urine, faeces (poo) or winds. Weak pelvic floor may also cause back pain.

To engage pelvic floor muscles, squeeze as if you want to stop peeing and then pull them up to the navel. This has to be only mild contraction. All stabilizers need to be worked at less than 30 per cent of their full capability.

Neutral spine/ neutral pelvis

To check if your pelvis is in neutral, put the heels of your hands on the hip bones, your fingers together on the pubic bone and join your thumbs together below your belly button (your hands are forming a triangle). Look down and check if there is level between your thumbs and fingers.

And remember! Finding your neutral is very important. What feels like neutral very often is not. Your pelvis must be neither tucked under nor tilted forward.

Breathing

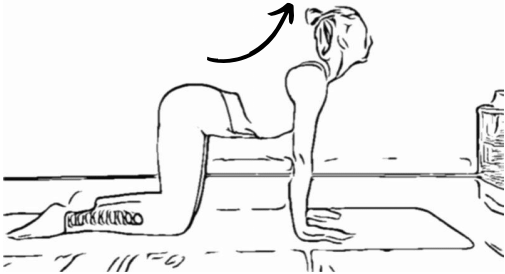
In pilates we use the lateral thoracic pattern of breathing which means sideways breathing into your ribcage without puffing up the belly (we have to maintain the core engagement - firm, strong and flat abdominals for spine and trunk stabilization). Put your hands on the sides of your ribcage (on your lower ribs), engage your abdominals (make them firm and strong) and lift your pelvic floor slightly. Start breathing into your ribcage. When your abdominals are engaged, there is nowhere for the air to go but to the sides. Think about expanding your ribcage sideways when inhaling and narrowing your ribs when exhaling. Feel the muscles in between your ribs stretching and contracting. Keep your abdominals strong all the time and do not let the belly bulge on the inhalation.

Make a breath complete by squeezing all the air out and then let your lungs fill up with the fresh air again.

Cat/Cow

Purpose: spinal mobility, flexion and extension, it is also a breathing exercise.

Upper back extension



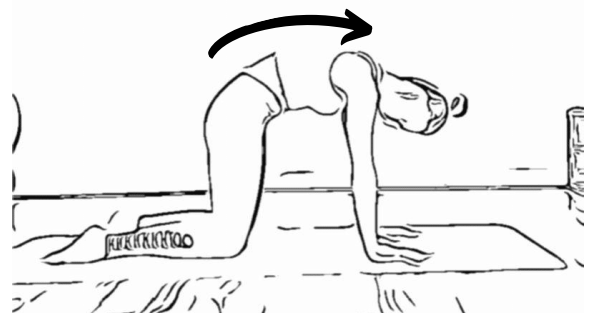
All fours. Wrists below shoulders, knees below hips, spine neutral, head in neutral. Movement starts from the pelvis. Inhale and tilt the pelvis forward and let the rest of the spine follow. You are arching your back, pressing the sternum forward and up. It is upper back extension position.

Then exhale and tuck your tailbone under rounding your lower spine, the rest of the spine and head follows.

Your navel is in, abdominals are engaged. Continue the movement fluidly, breathe.

Repeat 6 times. Finish the exercise in neutral.

C - curve



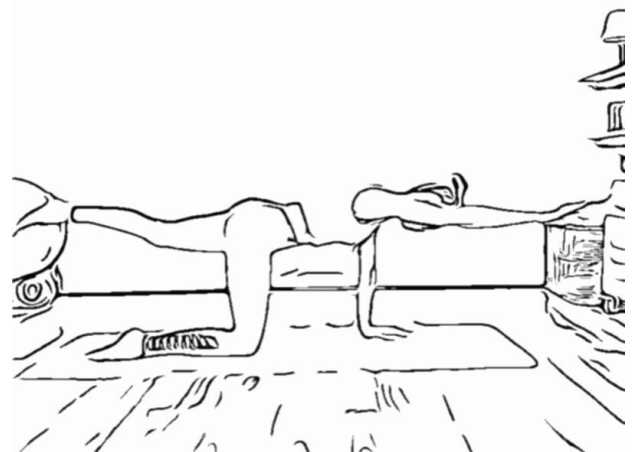
Swimming in the box

Purpose: spine stability and pelvis control while moving the limbs.

Find all fours position where your wrists are directly under the shoulders and knees under the hips.

Your spine is in neutral (maintaining all natural curvatures). Engage pelvic floor and deep abdominals. Inhale to prepare and on the exhalation slide and lift the right leg behind you and reach the opposite arm in front of you.

Maintain neutral and stable spine during the movement. Inhale and go back down and repeat the sequence to the opposite side. Keep the head aligned with the rest of the spine.



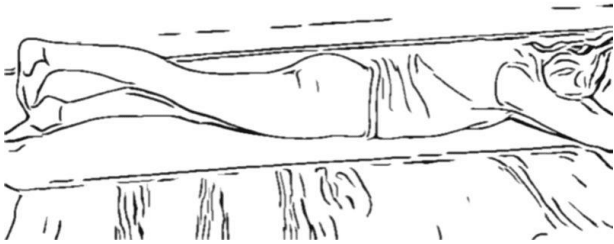
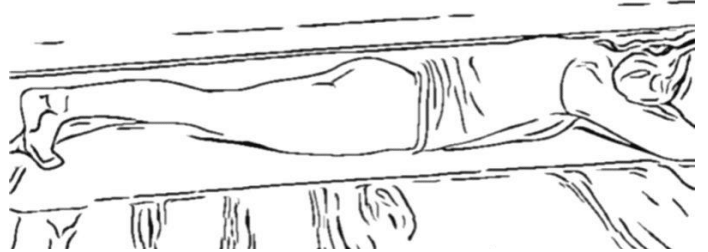
Repeat 5 times on each side.

Think about lengthening the limbs rather than lifting them high, do not arch your lower back, keep it still instead.

Glutes strength

Purpose: to activate and strengthen the gluteus maximus muscle, control of the lower spine.

Set up prone position where your head is resting on your hands, the neck is nice and long, shoulderblades depressed. Engage your core and squeeze your glutes. Flex your right foot and straighten the knee.

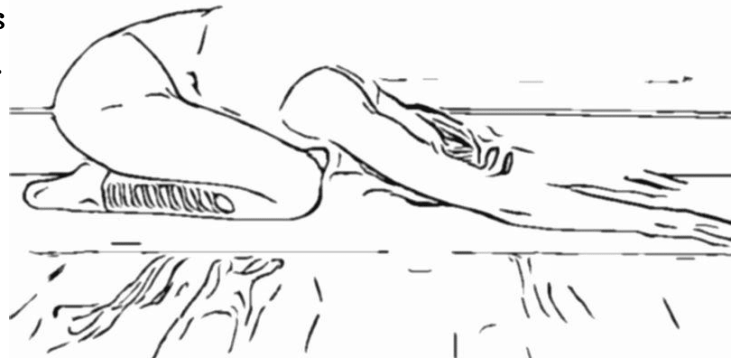


Inhale to prepare and on the exhalation lift the leg off the floor maintaining the flexed foot. Repeat 10 times and then switch to the other side. Do not lift the leg too high so you do not compensate in lower spine. The spine must remain still.

Child's pose

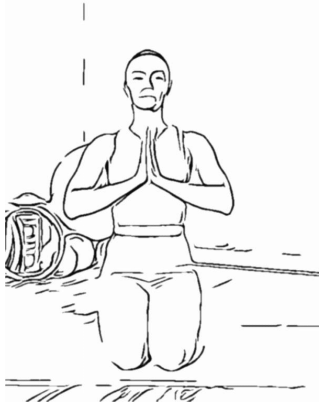
Purpose: to stretch and relax the spine, resting pose.

Sit back on your heels then reach your arms forward and put your chest on your thighs. Breathe slowly, stay here for 5 breaths.



Spine twist

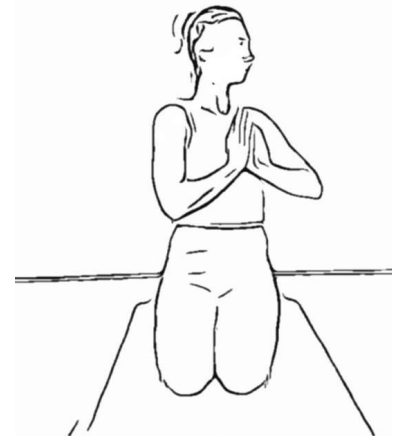
Purpose: to increase the range of motion in the upper body by training the trunk to spiral on the central vertical axis, while maintaining the support of a stable pelvis.



Sit tall on your heels, relax your shoulders, let the scapulas melt down, lengthen through the spine, keep your head on top of the spine. Put your hands like for the prayer on the sternum with your thumbs touching it. Engage your abdominals and pelvic floor muscles.

Inhale to prepare and on the exhalation twist to the right elongating through the spine. Twist from just above your waist line, not from the shoulders. Inhale and go back to the centre, and exhaling twist to the left. Keep your pelvis square all the time.

Repeat 5 times on each side.



Side stretch

Purpose: to stretch side of the body, spine mobility.

Sitting tall on heels, bring the right hand up and over the head. The other hand is on the floor by your side. Bend to the left side and stretch. Abdominals in, pelvic floor engaged, spine is elongated.

Repeat 3 times on each side.



Pelvic tilt

Purpose: working and strengthening abdominals and spine mobility.



Sit tall on your sit bones with your knees bent and feet flat on the floor. Put your hands on the back of your thighs and elongate your spine. Imagine you have a string attached to the crown of your head pulling you up towards the ceiling.

Inhale to prepare and on the exhalation pull abdominals in, engage pelvic floor muscles and round your lumbar spine. Create C - curve from your spine decreasing distance between shoulders and hips. Inhale and lengthen through the spine finding the starting position. Do not lean back. It is only about rounding your spine.

Repeat 5 times.



Tuck the tailbone under

Tick/Tock

Purpose: abdominal strength, control of the spine while twisting.

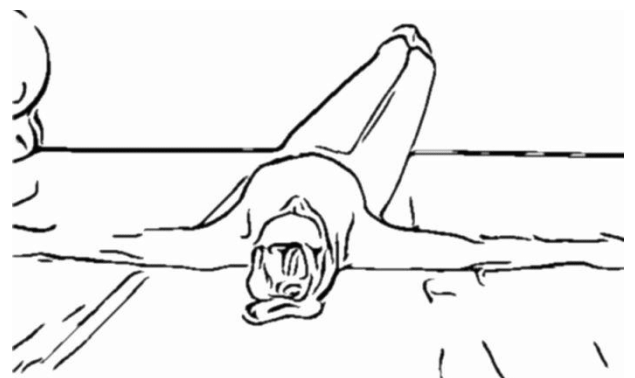


Lying on the back with your hands wide to the sides, bring one leg at the time to the table top position. Table top position is where your knees are directly over the hips and shins are parallel to the floor, toes pointing. You must keep the spine neutral and abdominals engaged all the time. Keep the knees and ankles together.

Inhale and lower both legs to the right side, keeping the stomach in and not letting the lumbar spine arch. On the exhalation bring the legs back to the centre, inhale and repeat the sequence to the opposite side.

Upper body is relaxed, shoulders down and both shoulder blades in contact with the mat.

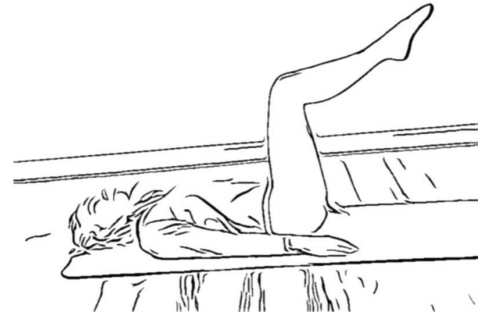
Repeat 5 times on each side.



Scissors

Purpose: to strengthen deep abdominals, spinal control.

Set up supine base. Spine is in neutral, inhale and while exhaling lift one leg at the time to the table top. Knees above hips, shins parallel to the floor. Make sure your core is engaged. Inhale to the sides of your ribcage and on the exhalation lower the right leg down as low as you can, maintaining neutral spine.



While lowering the leg, maintain the shape of the leg, keep the knee bent and the movement comes out of the hip joint. Inhale, lift the leg back to the table top. Then exhale and lower the left leg. Keep moving this way.

Repeat 8 times on each leg.

Shoulder bridge

Purpose: sequential control of the spine, glutes and hamstring strength, abdominals and pelvic floor strength.



Set up the same supine base. The spine is in neutral, deep abdominals and pelvic floor muscles engaged. Inhale to prepare and exhaling imprint the lumbar region of the spine to the mat. Inhale and go back to neutral.

On the next exhalation go a little bit higher, articulating the spine while peeling it off the mat. Repeat the movement until you can reach the full bridge position where your body is creating a ski slope position. Do not over arch your back, keep belly in and ribs glued to the torso. Slowly lower your back down trying to not skip any vertebrae.



Repeat 6 times.

Pretzel stretch/Figure four stretch

Purpose: gluteal region stretch.



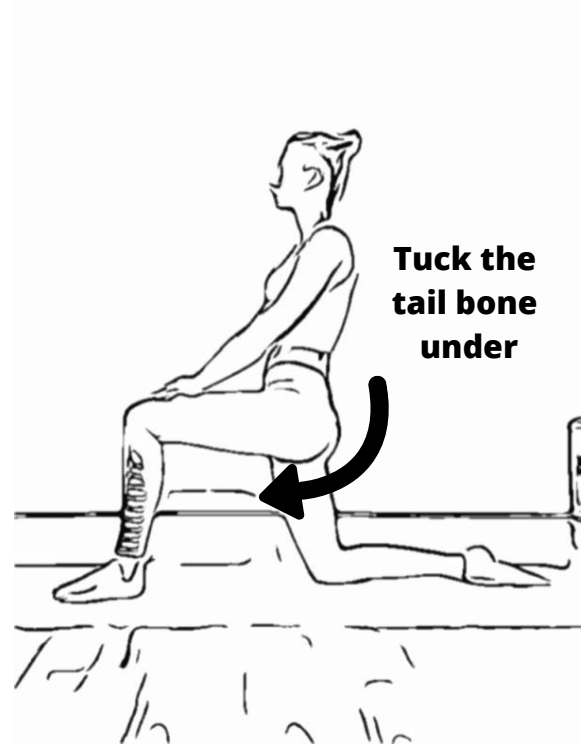
Lying on the back cross the right ankle over the left knee. Grab your left thigh in your hands and bring it closer to the chest pushing your right knee out, using your right elbow. Stay for the couple of breaths and then release slowly and repeat the opposite leg.

Lie aligned with the spine long and abdominals active.

Hold the stretch for 5 full breaths.

Hip flexor stretch kneeling

Kneel in a high kneeling position, put your right leg in front of you, keep the right angle at the knee joint. Tuck the tail bone under (pubic bone goes up, decreasing the distance between it and the sternum). You should feel the stretch in the front of your left hip and left thigh. Keep the position for 5 breaths and then switch to the other side. Make sure your pelvis is all the time tucked under and upper body is relaxed.

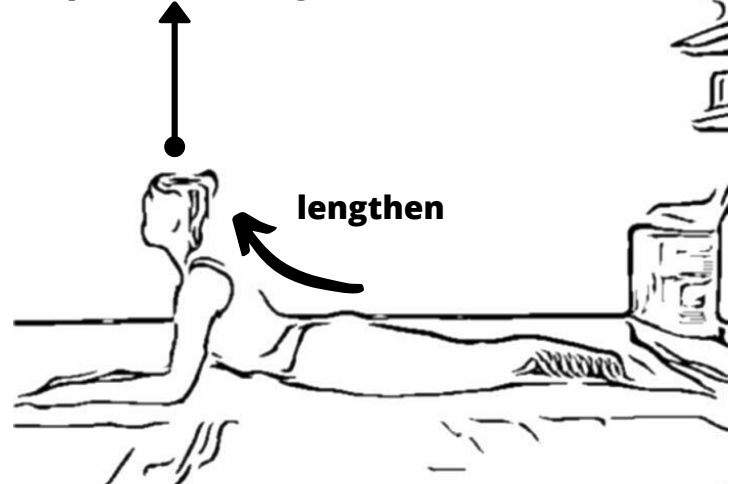


Little cobra stretch.

Purpose: to stretch the front of the body and mobilize the spine in the direction of extension.

Lie down on your front, rest on your forearms where your elbows are below your shoulders or slightly in front of them. Press your chest forward and lengthen through the crown of your head. Think about elongation through the whole spine. Do not tilt the head back, keep the back of the neck nice and long. Keep the position for 3 full breath cycles and then rest your head down. Repeat 3 times. Then rest in child's pose.

reach the crown of your head
up to the ceiling

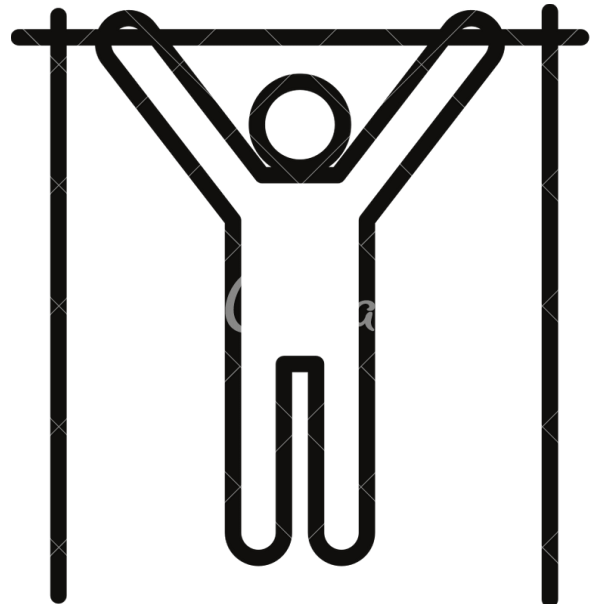


Spinal decompression exercises.

Bar hang ups.

If you have a pul-up bar hanging from it may alleviate your back pain as it helps to stretch your muscles and decompress your discs.

Grab the bar and hang on it gently. When starting you can still have your feet on the floor to stretch your spine, just bend the knees and let the gravity pull you down. Once comfortable increase the amount of body weight that is hanging and relax your muscles. Hold for 10-30 seconds depending on your comfort level. Let go of the bar and put your feet on the ground, take one minute break and then repeat the exercise 4 times. If it feels comfortable you can add the pelvis movement while hanging (tuck the tailbone under and release. You can also do a few hip hikes, circles, rotations, etc.)



References

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A few more tips to ease your pain.

Participate in your treatment.

Remember to consult your doctor for personalized medical advice. Ask your physician if any alternative medicine strategies such as acupuncture, mindfulness-based meditation, and other related therapies are suitable for you. Always take medications as prescribed by your doctor and participate in the treatment like physical therapies.

Relaxation.

Lie down on your back with your knees bent and feet flat on the floor. Place a thick book or yoga block under your head. Optionally you can place your feet on the chair (with your knees bent) to make the position more comfortable for your spine. Put one hand on the chest and the other on your belly just below the breast bone.



Close your eyes, and bring your attention inside the body. Try to localize tension in your body. Inhale through your nose and on the exhalation try to relax all of your muscles. Breathe in and feel the hand on your stomach rising. The hand on the chest should move only a little. Exhale and melt your body down into the floor. Stay here for around 10 min. Try focus only on your breathing, mindfully relaxing the whole body.

Belly breathing stimulates the vagus nerve which goes through the diaphragm and it is in charge of turning off the 'fight or flight' reflex. Stimulating this nerve activates your relaxation response which in turn reduces heart rate and blood pressure lowering your stress level.

Massage therapy.

Massage therapy is a non invasive treatment option and may ease your back pain as it has several potential health benefits. It increases blood flow and circulation. This in turn, brings nutrition to muscles and tissues which is needed for better healing. It also reduces muscle tension improving mobility of the joints, it lowers stress hormones and brings sense of relaxation to your body.



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Aromatherapy.

Researches show that aromatherapy may help you to relax and ease your pain. Essential oils derived from plants are used to treat illness, pain and enhance psychological and physical well-being. They may be absorbed through skin or olfactory system. You can add a few drops of oil to your bath or to your base oil and ask someone for a gentle massage. You can also use a diffuser for aromatherapy. You cannot apply essential oils directly onto the skin or digest them but after consulting with your physician and used correctly they may help you ease the pain.



Lavender oil, Rose hip oil, Clary sage oil, Eucalyptus oil - they all have anti-inflammatory and pain relieving properties.

Nutrition.



Balanced diet is a very important aspect of your overall health. As your bones, muscles and other tissues need all variety of vitamins and nutrients you can support your body by eating well. Eat regularly 3 - 4 meals a day, control your body weight, avoid sugar, alcohol and cigarettes, stay hydrated. Keep in mind that right diet has potential to prevent inflammation.

Foods to avoid

Sugar, white bread, high processed foods, trans fats, alcohol, fizzy drinks, processed meat, french fries, chips.

Dodaj podtytuł

Back friendly foods

Fruits like berries and veggies like tomatoes, leafy greens (spinach, kale), broccoli (source of sulforaphane - antioxidant with powerful anti-inflammatory effect). Celery also has anti-inflammatory properties. Celery extracts (3n-butylphthalide) can give relief from arthritis and muscular pain. Whole grain, fish (omega-3), lean meat, plant-based proteins (bean, lentils), nuts, olive oil, herbs (turmeric, garlic) are also back friendly foods and should be consumed.

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