



## Side Curl

The Side Curl works with the muscles that laterally flex the spine and laterally tilt the pelvis (hike the hips up one at a time). The Side Curl involves lying on the side with the knees bent, curling up to the side while lifting up the foot, and then slowly releasing down to the starting position.

### EXERCISE DESCRIPTION

**Starting Position:** Lie on your left side. You can rest your head on your left arm, with your arm either bent or straight. If that is not comfortable, you can put a small pillow under your head. Bend your knees so that your thighs lie at a 90° angle to your torso, and your lower legs lie at a 90° angle to your thighs – as if you're sitting in a chair.

**Upper Body Movement:** Wrap your right arm up and over your head so that you can cradle your head, with the fingers of your right hand covering your left ear. Inhale fully, then as you exhale, curl up to your right side, supporting your head with your right arm. Imagine that you want to bring your right armpit down to touch your right hip. Feel the contraction of the muscles in the right side of your waist. Keep facing straight forward; don't turn or twist backward or forward as you curl up. When you're ready, release your waist muscles as slowly as you can to come back down to your neutral starting position.

**Leg Movement:** Rest your right hand on the floor in front of you, and let your right arm be relaxed. Make sure you are still in your starting position: with your thighs at a 90° angle to your torso, and your lower legs at a 90° angle to your thighs. Keeping your knees together, slowly lift up your right foot. Keep your right leg at a 90° angle as you lift up your foot. Feel the contraction of your waist muscles on your right side as you lift up. When you're ready, release your waist muscles and lower your foot down as slowly as you can.

**Full Side Curl:** Wrap your right arm up and over your head so that you can cradle your head, with the fingers of your right hand covering your left ear. Inhale fully, then as you exhale, curl up to your right side, and at the same time lift up your right foot while leaving your knees together. Feel the contraction of your waist muscles on your right side. When you're ready, release your waist muscles and lower down as slowly as you can. Lower your upper body and foot down at the same rate. When you reach your neutral starting position, relax completely. Repeat several times.

**When you're done, slowly roll over onto your right side, and repeat the movement sequence using your left side as your working side.**

## **ANATOMY OF THE SIDE CURL**

**Upper Body Movement:** The upper body portion of the Side Curl is a lateral flexion of the spine. While we generally focus on the obliques when teaching the Side Curl to students, other muscles are involved in the movement as well. The muscles that laterally flex the spine are:

Erector spinae group  
Quadratus lumborum  
Internal and external obliques  
Intertransversarii  
Latissimus dorsi

**Leg Movement:** The leg lift involves both a hiking of the hip (lateral tilting of the pelvis) and a lateral flexion of the spine. The muscles that laterally tilt the pelvis are:

Quadratus lumborum  
Iliopsoas

**Breathing in the Side Curl:** Since one side of the lungs and abdomen gets compressed as the student curls up, it is most natural to inhale before starting the movement, then to exhale during the curl up. Exhaling during the curl up will allow the student to curl up more fully. After exhaling and curling up, they can breathe as needed until they have released back down to their neutral starting position.

Remind your student that incorporating their breath is an important aspect of this and all movements. Incorporating breathing into the exercises teaches the nervous system how to breathe deeply, fully, and naturally while moving.

## **CONDITIONS HELPED BY THE SIDE CURL**

The Side Curl addresses the following conditions by releasing involuntary muscle contraction in the muscles that laterally flex the spine and hike the hips:

Scoliosis  
Functional leg length discrepancy  
Sciatica

Back tightness and pain  
Disc problems  
Shoulder tightness and pain  
Frozen shoulder  
Bursitis in the shoulder or hip  
Thoracic outlet syndrome  
Tennis elbow  
Carpal tunnel syndrome  
Neck tightness and pain  
Hip, knee and ankle pain

## HOW TO TEACH THE SIDE CURL

**Get the student in their starting position.** Instruct the student to lie on their left side. They can rest their head on their left arm, with the arm either bent or straight. If that is not comfortable, they can put a small pillow under their head. Just make sure that their head and neck are in line with the rest of their spine. Their knees should be bent up in front of them as if they are sitting in a chair, with their thighs at a 90° angle to their torso, and their lower legs at a 90° angle to their thighs. Watch the student as they perform this exercise and make sure that they always return to this starting position after each movement.

**Invite the student to close their eyes.** Closing their eyes removes all the visual information that their brain would otherwise have to process. Keeping the eyes closed allows the student to focus completely on their internal sensations.

**First teach the upper body movement.** Instruct the student to wrap their right arm up and over their head so that they can cradle their head, with the fingers of their right hand covering their left ear. Their elbow will be pointing slightly forward – not directly up toward the ceiling. Tell the student to take a full inhale, then to exhale as they curl up to the side. They should use their right hand to support their head if needed as they lift up their head and bring their right shoulder down toward their right hip. Make sure they are facing forward; not twisting backward or forward as they curl up. Ask the student to notice the contraction of muscles in the right side of their waist as they lift up. You can gently tap their right waist to bring their sensory awareness to the muscles if needed. When the student has curled up as high as they want to, instruct them to release down as slowly as they possibly can.

**Then teach the leg lift as a separate movement.** While practicing just the leg movement, the student can rest their right hand on the floor in front of them, and completely relax their right arm. Make sure the student is still in their starting position: with their thighs at a 90° angle to their torso, and their lower legs at a 90° angle to their thighs. Instruct the student to keep their knees together and slowly lift up their

right foot. They should be sure to keep their leg at a 90° angle as they lift up their foot. Ask the student to notice the contraction in the muscles in the right side of their waist as they lift up. You can gently tap their right waist to bring their sensory awareness to the muscles if needed. When the student has lifted up their foot as high as they want to, instruct them to release and lower their foot down as slowly as they possibly can.

**Talk the student through a full Side Curl.** Instruct the student to wrap their right arm up and over their head, with the fingers of their right hand covering their left ear. Make sure the student is still in their starting position: with their thighs at a 90° angle to their torso, and their lower legs at a 90° angle to their thighs. Instruct the student to start with a full inhale. As they exhale, they should lift their head and curl up to the side while at the same time lifting up their right foot and leaving their knees together. Ask the student to notice the contraction of the muscles along the right side of their waist. You can gently tap their right waist to bring their sensory awareness to the muscles if needed. When the student has curled up as high as they want to, they should release and lower down as slowly as they possibly can. They should try to lower down their upper body and leg at the same rate. You can count to eight or have the student count to eight (or more!) as they lower down. When they have reached their neutral starting position, they should relax completely before repeating the movement. They can repeat the Side Curl several times.

**When the student is done, instruct them to slowly roll over onto their right side, and repeat the movement sequence using their left side as their working side.** As they do the movement sequence with their left side, ask the student to notice the differences they feel between their right and left sides while doing the movements.

### **Consideration:**

When teaching exercises like the Side Curl that can be practiced on either the right or left side, remember this principle of neuromuscular learning: the nervous system will best remember the last thing that it learned.

So, if your student's obliques are tighter on one side than the other, it will be beneficial for them to practice the Side Curl in a certain order. If their right side is tighter, they should do the side curl first with their left side as their working side. It will feel easier for them to do the movement with their left side, so it will be easier for them to learn it correctly and feel how it should be felt. Then they can do the exercise with their right side as their working side, and they will notice how it feels different. By doing the right side second, the release that they feel on their right side will be more likely to stick with them.

If you determine that it would be beneficial for your student to practice the right and left sides in a certain order, tell your student to do them in this order at home, and explain to them why it's important. You can also tell your student that they can do

more repetitions with their tighter side, because it will help them to even out their right and left sides.

### **Common mistakes:**

The most common mistake in practicing the Side Curl is getting out of the starting position in some way. Staying in that position with 90° angles at the hips and knees is very important for targeting the obliques. If the legs extend longer (increasing the angles at the hips and knees), the student will end up arching their back and engaging their back muscles to help them do the Side Curl. If the knees are brought in closer to the chest (this is not very common), the student will be engaging the rectus abdominis muscle.

Another important part of the starting position is that the head and shoulders should be facing straight forward. They should not be twisting open, so that the student starts to look up toward the ceiling. They should also not be turning or rounding forward, so that the student is looking toward the floor. The student must keep facing forward throughout the whole movement.

In the leg movement, it is common for people to contract the hamstrings of the leg that is lifting up. This results in the angle of the knee becoming less than 90°. Make sure that your student does not do this; they need to keep that 90° angle at both knees intact as they lift up their foot. Their focus should be on the muscles of their waist working to lift up their foot and rotate their hip.

Remind your student to rest in their neutral starting position before repeating the movement. While resting in neutral, they should completely release all their muscle tension. If they do not, then they are teaching themselves to hold on to some unnecessary tension in order to stay “prepared” for the next movement. This is not necessary, nor is it beneficial.

It is common for people to use their non-working side to brace themselves during this movement. So, they may be slightly contracting the oblique muscles on the side of their waist that is lying on the floor. While this contraction will help them feel more stable, it will shorten their range of motion when curling up. Ask your student to try to completely relax the side of their waist that is lying on the floor, then do the curl. This will help them curl up more fully, and help them to gain awareness of when they are bracing themselves unnecessarily.

For many people, the obliques can be difficult to sense at first. Often, new students will do the curl, and while they are clearly using their obliques to do the movement, they will say that they cannot feel the muscles contracting. You can gently tap the side of their waist as they curl up to bring their sensory awareness to the muscles. Or, you can instruct them to put their hand on the side of their waist so that they can feel the

contraction for themselves. It can take some time for students to gain sensory-motor awareness of their obliques, so tell them to be patient and keep practicing the Side Curl. The awareness and control will come with time and practice.

### **The following is an example of how I teach the Side Curl:**

Lie down on your left side, and bend your knees up in front of you as if you're sitting in a chair. You can stretch your left arm straight on the floor, as if you're reaching above your head and your arm is in a straight line with your spine. Then you can rest your head on your arm. If that isn't comfortable for you, you can bend your left arm so that your elbow points forward, and then rest your head on your arm. If that isn't comfortable, you can rest your head on a small pillow. Just make sure your head and neck are still in line with the rest of your spine.

Your starting position in this exercise is really important. Your spine, thighs, and lower legs should be at 90 degree angles to each other. Look at your position, and make sure your knees are bent up in front of you so that your thighs are at a 90 degree angle to your spine. Then make sure your lower legs are at a 90 degree angle to your thighs. Notice how this starting position feels so that you can return to it after each movement.

We'll do this exercise in two parts – first I'll teach you a movement with your upper body, then a movement with your leg, and then we'll put it together.

Reach your right arm over your head and try to cover up your left ear with your right hand. Your right arm will be going over your head like a headband, with your elbow pointing up and a little forward. Your arm will help support the weight of your head in this movement.

Take a full inhale, and then as you exhale, slowly lift your head up to the right side – as if you want to bring your right armpit down to touch your right hip. See if you can feel the muscles on the right side of your waist contracting to do this movement. When you've lifted up as high as you want to, release as slowly as you can back down to your starting position.

Do this movement one more time. Take a full inhale, then as you exhale, slowly start lifting your head up to the side, bringing your right armpit down toward your right hip. Feel the muscles along the right side of your waist contracting. Hold it for just a moment at the top, feeling that contraction, then release to the count of eight. When you're done, let your arm come down to the floor in front of you and rest.

Check in with your position – are you still making those 90 degree angles with your spine, thighs and lower legs? If not, shift yourself back into that starting position.

Now you'll do a movement with your right leg. Leave your right palm on the floor in front of you, and your right arm relaxed. Keep your knees together, and keep your right leg in that 90

degree position, and slowly start lifting your right foot up toward the ceiling. Remember, keep your knees together and your leg in that 90 degree position. This movement is kind of like opening a door. Feel the contraction of the muscles in the right side of your waist as you lift up your foot. When you've lifted as high as you want to, release back down as slowly as you possibly can.

Do this movement one more time. If you want to, bring your hand to your waist so that you can feel the muscles that are working in this movement. Keep your knees together, and slowly lift your right foot up. Feel the contraction of the muscles in the right side of your waist as you lift up your foot. When you've lifted as high as you want to, release and lower your foot down to the count of eight.

Now you're going to put these two movements together. Check in with your position again, and make sure you're in that 90 degree starting position. Reach your right arm over your head like a headband, and cover up your left ear with your right hand. Take a full inhale, and as you exhale, start lifting up your head and your right foot at the same time. You should feel the muscles along the right side of your waist contracting to help you lift up. When you've lifted up as much as you want to, release down as slowly as you possibly can, resisting gravity all the way down.

Do the full Side Curl one more time. Start by taking a full inhale, and then as you exhale, lift up your head and your right foot at the same time. Feel the muscles along the right side of your waist contracting to help you lift up. When you've lifted up as high as you want to, release down to the count of eight, lowering your upper body and foot down at the same rate.

When you're done, let your right arm come down and let your hand rest on the floor in front of you. When you're ready, roll onto your back and stretch out your legs, and just rest for a moment. Since you've worked with just your right side so far, notice how your right side feels different than your left side.

When you're ready, gently roll onto your right side, and bend your knees up in front of you as if you're sitting in a chair.

(Teach the same movement sequence with the left side as the working side.)