



Arch & Curl

The Arch & Curl works with the muscles of the lower back, abdomen and chest. The Arch & Curl involves first doing an arch with the lower back, releasing to neutral, then engaging the abdominal and chest muscles to lift the head off the floor and curl up toward the knees.

*Note that I teach two versions of this exercise. The original, simple version is described below, and shown in the “Notes on teaching” video. The alternate version (in which the elbows are brought together in front of the face when curling up) is what I show in the video demonstration. There are notes on this alternate version in the “How to teach” section of this document.

EXERCISE DESCRIPTION

Starting Position: Lie on your back with your knees bent and your feet on the floor, a comfortable hip width distance apart, so that you are using little to no effort to be in this position. Bring your hands behind your head and interlace your fingers, so your head is resting on your hands. Let your elbows fall outward toward the floor.

Arching Movement: Inhale down into your lower belly and gently roll your pelvis forward, arching your lower back and letting your belly stick out. Your tailbone remains on the floor. You should feel a gentle contraction of your lower back muscles as you roll your pelvis forward. When you’re ready, exhale and release your lower back muscles as slowly and smoothly as you can, coming back to your neutral starting position without engaging your abdominal muscles.

Curling Movement: Inhale down into your lower belly, then slowly exhale and flatten your lower back down into the floor. Tuck your chin and lift your head off the floor, curling up toward your knees. Only curl up as high as you can comfortably. Feel the contraction of your abdominal muscles as you curl up. When you're ready, release your abdominals as slowly as you can, very slowly letting them lengthen as you lower your head down toward the floor. When your head reaches the floor, you can completely relax.

ANATOMY OF THE ARCH & CURL

Arching Movement: The extensor muscles of the lower back contract to roll the pelvis forward and arch the lower back. These muscles include:

Erector spinae group
Transversospinalis group
Intertransversarii
Interspinalis
Quadratus lumborum
Latissimus Dorsi
Iliopsoas

The student's focus should be on gently contracting the muscles of the lower back as they roll their pelvis forward, and on becoming aware of the sensation of these muscles contracting.

The student may feel the *rectus femoris* at the fronts of the hips contracting as they roll their pelvis forward. They should try to release this contraction and keep these muscles relaxed as much as possible.

After rolling the pelvis forward into the arched position, the student then slowly releases the lower back muscles to allow the pelvis to roll back to the neutral starting position. The student should not engage their abdominal muscles or any other muscles in order to come out of the arch. The pelvis should return to the neutral starting position only as a result of the student slowly, consciously releasing their lower back muscles.

Curling Movement: The abdominal muscles contract to roll the pelvis backward, pressing the lower back down into the floor. Even if the student is primarily using their *transverse abdominis* to flatten their lower back, they will engage their *rectus abdominis* and *internal and external obliques* when they lift their head and shoulders off the floor. When they tuck their chin, they will engage their *sternocleidomastoid*, *anterior scalene*, *longus capitis* and *longus colli*. The student will also likely engage their *pectoralis major and minor* as they lift up and pull their shoulders and elbows forward. After curling up as high as they want to, the student should focus on releasing everything as slowly as possible to return to their neutral starting position.

Breathing in the Arch & Curl: Arching the lower back is a natural extension of inhaling and allowing the lower belly to expand outward, while flattening the lower back is a natural extension of exhaling. Inhaling down into the lower belly while arching and exhaling while flattening and curling up should feel natural and will enhance both movements. Attempting to do the opposite will restrict both movements.

Students should inhale as they arch, letting their lower belly expand. After coming into the arched position, they can breathe as needed until they have returned to their neutral starting position.

Students should begin the Curl by inhaling down into their lower belly, then exhaling completely as they flatten their lower back and then curl up. After exhaling and curling up, they can breathe as needed until they have released back down to their neutral starting position.

CONDITIONS HELPED BY THE ARCH & CURL

The Arch & Curl addresses the following conditions by releasing involuntary muscle contraction in the lower back, abdomen and chest.

Lower back tightness and pain
Hyperkyphosis/Rounded shoulders
Forward head posture
Neck tightness and pain
Headaches
Shallow breathing

HOW TO TEACH THE ARCH & CURL

Get the student in their starting position. The student should be lying on their back with knees bent and feet on the floor. Knees and feet should be a comfortable hip width distance apart. Instruct the student to bring their hands behind their head and interlace their fingers, so that their head is resting on their hands. They should let their elbows fall outward toward the floor. Ask the student to notice whether or not their elbows are touching the floor.

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 talk the student through an Arch. The student already knows how to do an Arch, but talk them through it as a reminder. Having their hands behind their head will make the arch feel different. Instruct the student to gently roll their pelvis forward as they inhale down into their lower belly. They should relax their abdominal muscles and let their belly stick out as they fully inhale and roll their pelvis forward. Their tailbone will gently press down into the floor as their lower back arches off the floor. Ask the student to be aware of a gentle contraction of their lower back muscles while they are in the arched position. When the student is ready, they should focus on releasing their lower back muscles to return to their neutral starting position *as slowly*

as possible. They should not engage their abdominal muscles or any other muscles to help them release out of the arch. They should return to their starting position only as a result of slowly, consciously releasing their lower back. They may not come to a fully flat position with their lower back, and that is fine.

Then teach the Curl as a separate movement. While the student is resting in their neutral starting position, instruct them to take a full inhale down into their belly (no arching this time!). Then as they slowly exhale, the student should gently flatten their back down into the floor, engaging their abdominal muscles. Then instruct the student to tuck their chin and curl up toward their knees. Ask the student to notice their abdominal muscles getting shorter and tighter as they curl up. The student only needs to curl up as high as they can comfortably; this is not a full sit-up. When the student has curled up as high as they want to, instruct them to lower down and release their abdominals *as slowly as they possibly can*.

Talk the student through a full Arch & Curl. Remind the student why it is so important to release completely to their neutral position before doing each Arch and each Curl: The slow, conscious release back to neutral is what releases the involuntary muscle contraction and allows the student to regain voluntary control of the muscles. Talk the student through an Arch, then rest in neutral for a few seconds. Then talk them through a Curl (remember to start with an inhale before exhaling and flattening!). After returning to their neutral starting position, have the student do the full Arch & Curl one or two times on their own to make sure they understand it. When the student is done, ask them to notice if their elbows are closer to the floor than they were before doing the exercise.

Optional: If you wish, you can teach your student the alternate version of the Curl, which I teach in the demonstration video. In the alternate version, the student should bring their elbows together in front of their face and press their shoulders off the floor, squeezing them together as they curl up. They should keep their elbows together until they have lowered their head back down to the floor. Then they should squeeze their shoulders and elbows together again, pressing their shoulders off the floor and engaging their pectoral muscles, and then release their shoulders and elbows down to the floor *as slowly as they possibly can*. This release should be done to the count of twelve or more. The student should be focusing on lowering their *shoulders* down as slowly as possible. A good reason to teach your student this alternate version is if they have rounded, medially rotated shoulders.

Common mistakes:

The most common mistake is not releasing completely to neutral in between the Arch and the Curl. Remind your student of the importance of slowly, consciously releasing to neutral after each Arch and each Curl, and suggest that they rest in neutral for a few seconds before beginning each Arch and each Curl.

Your student may also rush into the Curl without first taking a full inhale, then exhaling as they flatten and curl up. Remind your student that incorporating their breath is an important aspect of this movement. Fully exhaling as they curl up will enhance the movement. Also, incorporating deep lower belly breathing into the exercises teaches the nervous system how to breathe deeply, fully, and naturally while moving.

Another common mistake is skipping the Arch altogether. The student may feel that they do not need to practice the Arch again (after doing it in the Arch & Flatten), and they may feel impatient and want to focus just on the new, bigger movement of the Curl. However, the Arch helps to fully release the abdominals, and it ensures that the student is working with their body in a balanced way.

Counting can help the student to move slowly enough as they release out of the Curl. You can suggest counting to eight (or more) as they release back down to neutral to make sure they are moving slowly enough.

The following is an example of how I teach the Arch & Curl:

Lie down on the floor on your back. Bend your knees and put your feet on the floor, and let your knees and feet be a comfortable hip width distance apart. We're going to learn a movement called the Arch and Curl now. This exercise releases the lower back, chest and abdominal muscles.

Bring your hands up behind your head, and interlace your fingers, so that your head is resting on your hands. Let your elbows fall out toward the floor, and notice whether they're touching the floor or not. If one elbow or both elbows are lifted off the floor, just notice that. It means you are holding something tight on the front of you – maybe muscles in your chest, the front of your shoulders, or your abdominals – and it's preventing your elbows from resting fully on the floor.

Start by doing an arch. Inhale down into your lower belly and gently roll your pelvis forward. Feel the gentle contraction of your lower back muscles. When you're ready, release your lower back muscles as slowly as you can to come back to neutral.

When you've reached your neutral starting place, take another nice big inhale down into your lower belly. Then as you exhale, flatten your back into the floor, tuck your chin, and start lifting your head and shoulders off the ground, bringing your head and elbows closer to your knees. Feel your abdominals contracting to help you curl up. When you're ready, release your abdominal muscles as slowly as you can to let your head and shoulders lower back down toward the floor. When your head and shoulders reach the floor, relax your chest completely so that your elbows fall out toward the floor, and rest.

Let's go through that full Arch and Curl sequence again. Start by inhaling down into your lower belly as you gently roll your pelvis forward, and feel the muscles in your lower back gently contracting. When you're ready, release your lower back muscles as slowly as you can to come back to neutral.

When you've reached your neutral starting place, take another nice big inhale down into your lower belly. Then as you exhale, flatten your back into the floor, tuck your chin, and start lifting your head and shoulders off the ground, bringing your head and elbows closer to your knees. Feel your abdominals contracting to help you curl up. When you're ready, release down to the count of eight: one...two....three....four...five....six...seven...eight. When your head and shoulders reach the floor, relax your chest completely so that your elbows fall out toward the floor, and rest.

Notice where your elbows are now - if they were lifted off the floor before, are they still?