



Arch & Flatten

The **Arch & Flatten** is the first exercise taught to every student. The exercise involves gently rolling the pelvis forward and backward while lying on the back with the knees bent. The Arch & Flatten allows clients to release and regain control of the lower back and abdominal muscles.

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. You can rest your arms by your sides on the floor, or let your palms rest on your lower belly to bring your awareness to your breath.

Arching Movement: Inhale down into your lower belly and gently roll your pelvis forward, arching your lower back and sticking out your belly. Your tailbone will remain 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.

Flattening Movement: Inhale down into your lower belly, allowing your abdominal muscles to relax and your lower belly to expand. Then as you slowly exhale, flatten your lower back down into the floor using your abdominal muscles. Try to get the feeling of hollowing out your belly. When you're ready, release your abdominal muscles as slowly and as smoothly as you can to come back to your neutral starting position.

ANATOMY OF THE ARCH & FLATTEN

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.

Flattening Movement: The abdominal muscles contract to roll the pelvis backward, pressing the lower back down into the floor. Most students will automatically use the superficial abdominal muscles (*rectus abdominis* and *internal and external obliques*) to do this action. It is beneficial for the student to sometimes focus on using their *transverse abdominis*, a deep abdominal muscle, to hollow out the belly as they flatten their back into the floor. The student can explore the difference and use the flattening movement to release and regain voluntary control of both the deep and superficial abdominal muscles.

Breathing in the Arch & Flatten: Arching the lower back is a natural extension of inhaling and allowing the lower belly to expand outward, while flattening the lower back and hollowing out the belly is a natural extension of exhaling. Inhaling down into the lower belly while arching and exhaling while flattening 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 Flatten by inhaling down into their lower belly, then exhaling completely as they flatten. After exhaling and coming into the fully

flattened position, they can breathe as needed until they have returned to their neutral starting position.

In the Arch & Flatten and all Clinical Somatics exercises, students are instructed to inhale and exhale at certain times when these actions enhance or play a role in the movement. However, students should never hold their breath in order to complete a movement as instructed.

CONDITIONS HELPED BY THE ARCH & FLATTEN

The Arch & Flatten directly addresses the following conditions by releasing involuntary muscle contraction in the lower back and abdominals, and alleviating compression of the lumbar vertebrae.

- Muscle tightness in the lower back and abdominals
- Lower back pain
- Disc problems in the lumbar spine
- Sciatica
- Hyperlordosis
- Sway back posture
- Flat lower back (tucking pelvis under)

HOW TO TEACH THE ARCH & FLATTEN

Get the student in their starting position. They should already be in their starting position from having done the Lower Belly Breathing first: Lying on their back with knees bent and feet on the floor. Knees and feet should be a comfortable hip width distance apart. The student may keep their palms resting on their lower belly if they wish.

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 Arch. 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. Allow the student to rest in their neutral starting position for at least a few seconds before repeating the arch. Talk the student through the arching movement one or two more times to make sure they understand it.

Then teach the Flatten 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. Watch how the student does this movement the first time (with the superficial or deep abdominals). When the student has fully exhaled and flattened their back down into the floor, instruct them to release their abdominal muscles to come back to their neutral starting position *as slowly as they can*. When they have fully released and are resting, you can describe the difference between using their superficial and deep abdominal muscles. Talk the student through the flattening movement one or two more times to make sure they understand it. If they used their superficial abdominal muscles the first time, guide them through using their deep abdominal muscles the next time (or vice versa).

Talk the student through a full Arch & Flatten. First, tell the student why it is so important to release completely to their neutral position before doing the next movement: 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. After explaining this, talk the student through an Arch, rest in neutral for a few seconds, then talk them through a full Flatten (remember to start with an inhale!). After returning to their neutral starting position, have the student do the full Arch & Flatten one or two times on their own to make sure they understand it.

An optional addition to the Arch & Flatten: I don't recommend teaching this to your student until the second time you meet with them. Let them become comfortable with the basic Arch & Flatten before adding the movement of the head.

If the student is fully relaxed and not holding their back or neck tight, their head will naturally nod forward and tip backward as they arch and flatten. This is a subtle movement. As the student rolls their pelvis forward and arches their lower back, their head will nod forward as if they are looking down at their belly. Then as they flatten their back down into the floor, their head will tip backward slightly. This movement of the head is a natural part of the arching and flattening movement of the spine.

Common mistakes:

Other modalities teach movements that seem similar to the Arch & Flatten but are actually quite different. Make sure the student understands how important it is to do the Arch & Flatten exactly as you have instructed.

The most common mistake is not releasing completely to neutral in between the Arch and the Flatten. Students like to roll forward into the arched position, then immediately engage their abdominals to come into the flattened position. Explain the importance of slowly, consciously releasing to neutral after each Arch and each Flatten.

Students may hold their breath in an effort to breathe as you have instructed them to. Tell them it is important to keep breathing as much as they need to. They should inhale as they roll their pelvis forward into the Arch, then breathe as needed as they release to neutral and rest in neutral. They should inhale before they begin the Flatten, then exhale fully as they flatten their back down into the floor. Then they can breathe as needed as they release to neutral and rest in neutral.

When students practice this exercise (and any of the exercises) on their own at home, it is common for them to move too quickly. Explain the importance of releasing to neutral as slowly as they possibly can, using all their mental focus. If they ever feel that they are not getting benefit from an exercise, tell them to practice it even more slowly. Counting can help students to pace themselves; you can suggest counting to eight (or more) as they release back to neutral to make sure they are moving slowly enough.

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

Start by inhaling down into your lower belly, and at the same time, slowly roll your pelvis forward toward your feet. Relax your belly muscles and let your belly stick out as you fully inhale and arch your lower back. You might feel your tailbone pressing down into the floor. Notice if you feel a gentle contraction of the muscles in your lower back.

When you're ready, exhale and release your lower back muscles as slowly as you possibly can, very slowly letting your pelvis roll back to your starting position. Don't use your belly muscles to help you come back to neutral; just come back to neutral by slowly releasing your lower back. Take a moment to rest before you do this movement again.

When you're ready, inhale down into your lower belly, and at the same time slowly roll your pelvis forward so that you're arching your lower back and pressing your tailbone down into the floor. Feel the gentle contraction of your lower back muscles. Then as you exhale, release your back muscles as slowly as you can, allowing your pelvis to roll back to neutral. Don't use any muscle or force to come back to neutral; just let yourself come back to neutral by

releasing your lower back.

So, you just learned the Arch, and now I'll teach you the Flatten. While you're resting here in neutral, inhale down into your belly, but don't arch. Now as you slowly exhale, gently press your lower back down into the floor. Feel your abdominal muscles contracting to help you press your lower back down into the floor. When you're ready, release your abdominal muscles as slowly as you can to come back to your neutral starting position. Take a moment to rest before you do this movement again.

When you're ready you can inhale again, filling up your belly, then as you exhale you can gently flatten your lower back down into the floor. This time, see if you can hollow out your belly, and notice how you have to engage your abdominal muscles differently to do that. When you're ready, see how slowly and smoothly you can release your abdominals to come back to neutral.

Now I'll talk you through going back and forth from the arch to the flatten. First, inhale and fill up your belly as you roll your pelvis forward, letting your back arch off the floor. Then slowly exhale and release your lower back muscles as slowly as you can to come back to neutral. It's very important to come to neutral and rest before you do the flatten.

While you're resting in neutral, take a big inhale down into your lower belly, then exhale and flatten your back down into the floor, hollowing out your belly. Then when you're ready, release your belly muscles as slowly as you can to come back to neutral.

Optional second part:

So far we've been focusing just on the movement of the lower back and pelvis, but now start to become aware of your whole spine from top to bottom. There are little muscles that connect each vertebra to the one above and below it. Your whole spine is connected by muscles from top to bottom, so unless you are holding some of these muscles tight or other muscles in your core tight, when one part of your spine moves, the rest of your spine should naturally respond in some way.

See how relaxed you can be through your entire spine—up through your upper back, your neck and your head. As you arch and flatten, see if you can allow your head to start gently nodding. So as you roll your pelvis forward and arch your lower back, your chin will tuck down toward your chest, as if you want to look at your full belly as you inhale. Then as you flatten your back down into the floor, your chin will tip up toward the ceiling as if you want to look behind you. Don't force this movement—just see if you can relax and allow this gentle nodding of your head to become a natural, easy part of the movement.