

Isolate



Isolating exercises are a very important part of this process. Correctly identifying any weaknesses in the deepest stabilising layers of the back, pelvis and hip can make an amazing difference in the quality of adage. Work on these isolation exercises for at least two weeks before moving on to the integration exercises, even if they feel easy. Please note all of the instructions about checking for over recruitment in other areas for each of these exercises. This is essential in finding the true isolation in each area which will give the effortless float to your extensions.

4 Point Sit Backs

This is a good test for the endurance and control in the deep back muscles, and is especially good for hyper-mobile individuals. Initially, this exercise may be done with a pole along the spine to get an awareness of maintaining neutral. Common mistakes include allowing the tail to tuck under, or sinking the upper back into extension, and the pole allows greater feedback to correct your placement in the early stages.

A lot of high level classical dancers tend to sit with the pelvis in a posterior tilt. Often we've been taught to scoop in through the front of the low abdomen and flatten out the low back. The problem with this is that it inhibits a lot of the important deep back stabilisers which in turn can lead to a lot of gripping in the front of the hips over time. Other dancers brace with the muscles in their upper back which limits mobility. This is really good exercise to see whether you tend to flatten your back or whether you tend to arch it too much.

- Start on your hands and knees, keeping your knees under your hips and your hands underneath your shoulders.
- Use a pole or broomstick to get awareness of where your back is, making sure you're in a neutral position.
- The pole should be in contact with the back of the rib cage and your sacrum. There will be a small gap between the low back and the pole, but make sure to keep the neck long and lengthened.
- Start the movement by folding in the hips, taking your sitting bones back to the wall behind you, keeping the spine in a neutral position.
- Try not to let the hips sink or the back flatten.
- If you tend to brace with the bigger back muscles, the ribcage will arch off the pole as you start moving the hips.
- If you lose control of the deep back muscles the low back will flatten when you start to flex the hips.
- Repeat about 10 times, checking the positioning of the spine in a mirror.
- Once you are confident with the control of your spine you may do this exercise without the pole.
- Try doing the exercise side on to the mirror or with a partner to check the positioning of your spine.



Cushion Squeezes

The Cushion Squeezes exercise will help isolate and strengthen your deep Adductor (Inner Thigh) muscles. A lot of dancers do not realise how important these muscles are when carrying their leg to the front. Finding subtle control of the deepest inner thigh muscles (Pectineus) will give you much more control and support when carrying the leg to the front, and will help take the weight away from the outside of the hip. This can help take the pressure off your TFL if they have been over working. Remember that optimal control of the hips requires a fine co-ordination of all of the muscles around the hips, rather than brute strength in any one group.

- Lie on your back, with feet hip width apart and in line with each other.
- Place one hand under your lower back, to feel if the big back muscles are turning on as you contract the inner things (this is very common).
- Place a small, soft, slightly deflated ball between your inner thighs, about halfway down the legs rather than between the knees.
- Maintaining gentle, natural breathing, focus on drawing your two thigh bones together to squeeze the ball.
- Use your fingertips to check that the big back muscles, TFL and gluteals stay relaxed.
- Hold for three slow breaths, allowing the low belly to rise and fall with each breath, before releasing the inner thigh contraction.
- Repeat 8 times, or until you start to fatigue. This usually occurs after just 3 or 4 repetitions when dancers first start with this exercise, as it really isolates the often under-used Pectineus.
- If the legs start to tremble, simply stop and rest for a few moments while you do one of the other exercises before trying again.
- Working on this exercise carefully will really improve your endurance and strength of the inner thighs.



Note:

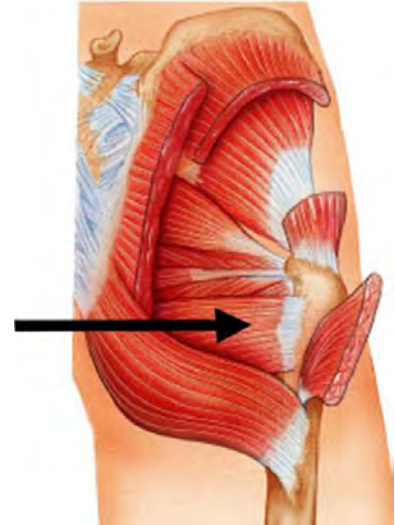
- Initially the ball must be placed quite low between your thighs, as it does tend to work its way up during this exercise.
- Monitor your TFL for over activity, especially if you have had issues with clicking in your hips.
- Neutral spine involves a gentle lift through the base of the spine, and a gentle drawing in and hollowing of the low pelvis, without flattening the back.
- While focussing on the inner thighs, make sure to keep the shoulders nicely open and relaxed.

QF Heel Squeeze

Often I ask dancers to show me where their turnout muscles are and I usually get a few interesting responses. Some dancers think that they are on top of the hamstrings, while others think they are at the top of their bottom or the front of the hip. In reality your turnout muscles are really deep in the back of the hip. Knowing exactly where these are and how to activate them is really important when you are trying to learn how to control the leg en l'air.

Your Quadratus Femoris (QF) muscle is an important turnout muscle, that will help your standing/supporting leg and also helps control your turnout devant. This QF Heel Squeeze is an ideal exercise to become aware of and activate your QF muscle. It is ideally done before any other turnout exercises.

Your QF is also one of the most important muscles to find, train, and incorporate into technique following any hip injury. It helps stabilise the head of the femur back in the socket and is an essential deep turnout muscle when standing, working en fondu and for turnout en avant. There are many different ways to activate QF, but care must be taken to ensure that it is done with no pain and without any activation of other global stabilisers around the hip. Different individuals will have different coping strategies, so it is important to keep checking around the hip for hidden compensation strategies.



1. Finding the QF

- Start on your side, with a cushion between your knees.
- Make sure that your thighbone is horizontal to the floor, supported by the cushion/pillow.
- Place your thumb on your greater trochanter, which is the highest knob of bone on the outside of the hip.
- Reach with your other fingers and place them on your sitting bone of that side of the pelvis.
- The QF muscle is halfway between these two points, in the gutter behind the greater trochanter.
- Use your fingers that were on the sitting bones to feel for your QF muscle deep in the back of the hip.
- You will need to use a decent amount of pressure to get through all of the superficial tissues.
- Make sure to try various different angles at the hip to find the one where your hip flexors and upper gluteals can be relaxed. This position is slightly different for everyone.



2. Activating QF

- To make sure the QF muscle is working effectively, ask your partner to lift your lower leg, internally rotating the thigh bone.
- Focussing on rotating the thigh bone in the socket, pull your foot down towards the floor against the resistance of your partners hand.
- Keep your fingers over the area of the QF muscle and see if you can feel a deep activation in the back of the hip.
- When activating correctly you should feel a slow, deep swelling of the muscle that builds up in intensity, rather than a sudden superficial gripping of the outer tissues.
- Repeat this movement a few times, making sure that the activation of the muscle is resulting in the actual movement of the leg, not just tightening the muscle.



3. Performing the Exercise Yourself

- Once you have found the correct activation, you can do a version of this exercise yourself.
- Stack your heels on top of each other, and use the previous cues to find the location of the QF
- Gently squeeze your heels together thinking of rotating the thigh bone in the socket.
- Keep your upper knee in contact with the cushion, rather than opening the legs.
- You should feel a deep thickening of the muscle under your fingertips.
- Hold for 3 breaths and then release, keeping your knees on the cushion throughout.
- Once you have the awareness to correctly activate the QF, use your fingers of your top hand to assess how much tone is being held in the front of your hips and the top of your gluteals. Both of these areas should be able to be kept relaxed when performing the subtle QF isolation exercise.



Note:

- Make sure Gluteus Medius and TFL remain soft throughout the exercise.
- If it is hard to keep them relaxed, try slightly altering the degree of flexion in the hips or repeating the trigger point release techniques and hip flexor mobilisers

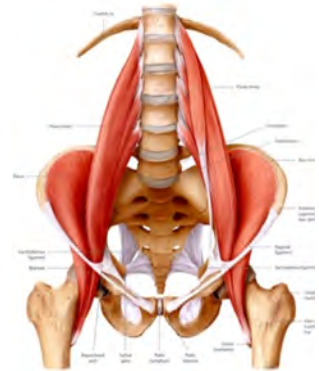
Iliacus Suck - in Lying

The next exercise we are going to do is called the Iliacus Suck. A lot of people have never even heard of their Iliacus muscle, but it is very important in controlling your extensions. It's not really something that people talk about when they're in ballet class, but knowing a bit more about the detailed anatomy of your hip flexors can really help integrating their action into your adage.

One of my old teachers used to say to “lift from your abs” when your lifting the leg to the front. I used to think that this was impossible as your abdominals don't attach down onto your leg. What I think she was trying to explain is to get a sensation of scooping and connection deep in the abdomen, however unfortunately she just didn't explain that in a way that made sense to my 14 year old brain. To make it easier to understand and conceptualise, I'm going to explain the actual anatomy and that will help you find the feeling that we're looking for in this exercise.

If you look at a model of a pelvis, your Psoas Major attaches onto the front of the Lumbar Spine and then comes forward to the front of the hip. Your Iliacus starts from inside the bowl of the pelvis before coming forward to to join with the tendon of the Psoas Major, creating your Iliopsoas tendon. This tendon attaches onto the inner aspect of your upper thigh bone, making it instrumental in flexing the hip.

These two muscles (Psoas Major and Iliacus) are what I have found to be the secret to beautiful high lifted extensions. To achieve that floating sensation we are going to use the Iliacus to help stabilise the hip back into the socket and then use the Psoas Major to help fold the hip. Some dancers manage to achieve the subtle coordination of them naturally, however most others need to specifically train them.



First we will practise the Iliac Suck in lying, and then in standing, before transferring it through to your développé devant later.

Assisted Version:

Initially it helps to work with a partner to get the direction of activation correct. Once you have this, you may work on the exercise alone.

- Start in lying, with one foot on the floor, and the other leg bent to 90 degrees with the foot on a chair.
- The partner will use both hands to gently traction the thigh bone up towards the ceiling.
- The dancer will oppose this traction drawing the thighbone back down and feel the hip heavy in the socket.



Independent Version

- Lie on your back, with one foot on a chair or Swiss ball, making sure the thigh bone is vertical.
- Keep the spine in neutral, with a very gentle lift in the low back to ensure activation of the deep back stabilisers.
- Using your hand, feel the outside of your TFL and top of the thigh, making sure all of those muscles stay soft.
- Visualise the thighbone being very heavy, and feel it slide back deep in the socket
- Repeat this movement a few times to become familiar with it. The movement is very subtle, with just a few mm in actual movement.
- When performing the exercise correctly, you will feel a gentle thickening inside the hip bone of the working leg, while all the surrounding muscles stay relaxed
- Once awareness of the hip suck is achieved add in a gentle knee float.
- Perform the hip suck, then allow the hip to flex, folding deep in the socket.
- The movement should be effortless and be controlled by the deepest hip flexors (Iliacus and Psoas Major) rather than by using the muscles on the outside of the hip.
- Do not worry too much about keeping the thigh in perfect parallel if there is any compression in the front of the hip.
- If your hips are very externally rotated it is ok to let the knee drift out slightly during the hip fold. Due to variations in anatomy the thigh bone will float up in a slightly turned up position.
- Repeat 8 times on each side, constantly checking for excessive gripping around the hip as the deepest muscles start to fatigue.



Note:

- Breathing must be natural and not forced
- Make sure you stay a little lifted under the lumbar spine throughout.
- Use hands to monitor over activity of the global back muscles (Erector Spine) and the superficial hip muscles (TFL, Gluteals)
- When the knee float is added in, make sure not to flex the spine or grip with the front of the hip.

Psoas Activation in 4 Point

This next exercise used to be involved in one of our turnout programs, but I rarely give it to dancers these days. I included it here to explain why I don't do it so much anymore and if you are doing it some points to be careful of. Once you know how to do it properly, you'll understand where the benefit can be but also the risks if you do it poorly. It's basically a hands and knees version of the Iliacus suck and float.

1. Basic Activation

- Start on hands and knees, keeping the spine in a neutral position, taking care not to hyper-extend the elbows.
- Accept your weight slightly onto your left leg, then draw the right thigh bone back into the socket with the same subtle sucking feeling as in the previous exercise
- Once you can master this, and the right knee clears the floor, float the right knee forward.
- Make sure to keep the pelvis stable and still. Avoid hitching the hip of the working leg, or flattening the lumbar spine.
- If this is happening, this is going to actually build up all the muscles that we don't want to use rather than the ones we're trying to find.
- Get your partner to check that the outer hip muscles, and especially the TFL are relaxed. Flexion must come from the deepest hip flexors to make this exercise effective.



2. With Resistance

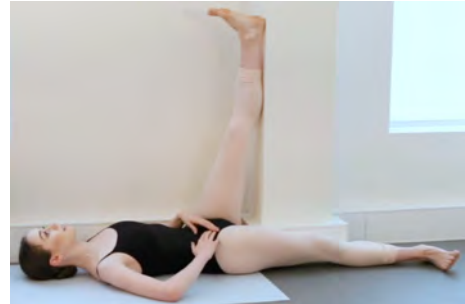
- This exercise can be progressed by the addition of a resistance band around the knee, however this should only be done if the outer hip remains relaxed.
- A lot of students will flatten the back and hitch the hip when drawing the knee forward. This can create a lot of tension around the outside of the hip, which is what we are trying to avoid in all our isolation exercises.
- Whilst doing this exercise, please make sure that you're thinking of all of these things and that you're not actually doing something that could be detrimental.

Turnout with Foot on the Wall

The last exercise in the isolation sequence is all about tying the previous isolation exercises together. This exercise is a good way to really learn how each muscle we have been working on actually supports your leg in a développé devant, because in the beginning they can seem a little abstract. You will need at least 90 degrees of hamstring flexibility to do this exercise comfortably. If this is difficult for you initially, focus more on the mobilisation exercises until your range improves.

1. Basic Rotation

- Lie close to the wall, with one leg up the wall and your finger tips on your hip bone.
- With the most minimal amount of effort, think of rotating the elevated leg in the socket, feeling the deep turnout muscles wrapping around underneath.
- Aim for the least amount of effort to get the leg to rotate, rather than gripping with all of the muscles.
- Relax the leg and let it return to parallel.
- Repeat this a few times, to get used to the feeling of the thighbone rotating easily in the socket.



2. Adding the Iliac Hip Suck and Float

- Rotate the leg using your deep rotators and centre the hip in the socket with the Iliac Hip Suck.
- Maintaining neutral spine, and with the big back muscles relaxed, float the foot off the wall by gently engaging your Psoas Major.
- Maintain regular breathing, and again focus on the most subtle control of the leg, with no extra activation around the hip.
- Lower it down and release to parallel.



3. Adding the Foot

- Once you are confident in the activation and control around the hip, you can add on the pointe through demi pointe exercise, while the leg is floating, articulating slowly through the foot.
- This is a much more challenging variation, so make sure to keep monitoring the activity of the superficial muscles around the hip.



