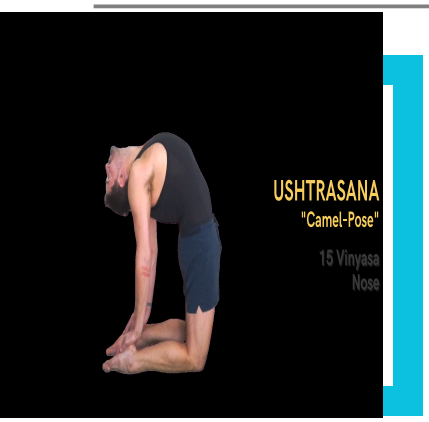

Ustrasana

Description

Camel Pose Ustrasana is a back bend in which the shoulders extend out behind (as in Purvottanasana). The hands on the feet connect the upper and lower appendicular skeletons (as in Danurasana).

USTRASANA

7	SAPTA	Inhale, jump forward, hold waist
		Exhale, engage the pelvic floor
		Inhale, prepare by lifting the spine away
8	ASTAU	Exhale, hold heels to enter posture, five
9	NAVA	Inhale, come up, hold waist, exhale
10	DASA	Inhale, lift up
11	EKĀDASA	Inhale, Urdhva Mukha Svanasana
12	DUĀDASA	Exhale, Adho Mukha Svanasana
13	TRAYODASA	Exhale, jump back, Chaturanga Dandasa

Anatomy

Ustrasana extends the back of the body to stretch the front. The shoulders draw back to link the hands to the soles of the feet, and the knees lever the body up and forward to deepen the pose. The thighs tend to drift backward in Ustrasana, decreasing the angle between the upper and lower legs. Contract the quadriceps to extend the knees. This brings the thighs perpendicular to the floor, deepening the backbend (especially when the hands are holding the bottoms of the feet). Review the section on facilitated stretches to see how isolated stretching of the fronts of the shoulders and hips can improve this pose. Notice how the individual parts work together to deepen the asana. For example, combine the subplot of extending the shoulders with the subplot of extending the knees to â??triangulateâ?• the spinal extension. Then engage the abdominals to produce the abdominal â??airbagâ?• effect. This prevents hyper-extension of the lumbar spine and aids in protecting the lower back.

BASIC JOINT POSITIONS

- The knees flex.
- The ankles plantar flex.
- The hips extend, internally rotate, and adduct.
- The trunk extends.
- The shoulders extend.
- The elbows extend.
- The forearms supinate.

Synergizing/Activating

- The rhomboids, connecting the spine and the shoulder blades, work with the lower and middle trapezius (spanning the back) to draw the shoulders back and down.
- The pectoralis minor in the upper chest lifts the rib cage.
- The posterior deltoids (at the back of the shoulders) extend the upper arm.
- The triceps, at the back of the upper arms, straighten the elbows.
- The wrists bend away from the body.
- The gluteus maximus in the buttocks and the hamstrings down the back of the thigh straighten the hips.
- The adductors in the inner thigh press the hips straighter and draw the thigh bones toward the body.
- The tensor fascia lata (down the outside of the hips) and the gluteus medius in the buttocks turn the thigh bones inward. This action counters the turning out of the thighs created by the gluteus maximus.
- The quadriceps (down the front of the thighs) partially straighten the knees to bring the thigh bones to a right angle to the floor.
- The gastrocnemius and soleus, the calf muscles, bend the ankles

Preparation

Begin with the hands on the hips and draw the elbows back and towards each other. Press downward on the hips to lift the chest. Then begin to arch the spine. Because this is a fairly advanced pose, work in this intermediate position at first to condition the muscles that arch the backâ??the erector spinae and quadratus lum- borum. Contract the quadriceps to extend the knees and bring the thighs to an upright position, perpendicular to the floor. Practice easing into and out of this position by pressing the shins down and attempting to straighten the knees. This levers the body upright. Once you have a good sense of balance, let the arms fall back symmetrically toward the feet. If youâ??re unable to reach the feet, then keep the hands on the hips. When you have gained sufficient flexibility, place the palms of the hands onto the soles of the feet. Take care not to rotate the body during this movement. Rotational movements while extending the spine, especially if unplanned, can result in injury. Maintain soft and steady breathing throughout.

STEP 1 Activate the erector spinae and quadratus lumborum to extend the back evenly throughout the length of the vertebral column. Notice how these muscles connect with the sacrum and ilia of the pelvis. This creates lumbopelvic rhythm, whereby the pelvis tilts forward as the back extends to create the final pose.

STEP 2 Engage the gluteus maximus to extend the hips and femurs. This also retroverts the pelvis, tilting it back and down and drawing it in an opposite direction to the back muscles described in Step 2. This combination of forces stabilizes the pelvis. The fibers of the posterior third of the gluteus medius assist the gluteus maximus in this movement. The posterior tilt of the pelvis helps to counteract hyperextension of the lumbar spine. The hamstrings synergize the actions of tilting the pelvis back and down and extending the femurs (when the lower legs are fixed on the mat). As you deepen the pose, relax the hamstrings, or they will bend the knees and draw the thighs away from their vertical position.

STEP 3 Engage the posterior deltoids to extend the shoulders. You can review this action in the muscle isolation section. Contract the infraspinatus and teres minor muscles to externally rotate the shoulders. Use the triceps to extend the elbows, and contract the supinator muscles of the forearms to rotate the palms so that the outer sides preferentially push down on the feet. Then balance the action of the supinators by pressing the mounds at the base of the index fingers into the soles, engaging the pronator teres and quadratus muscles of the forearms.

STEP 4 If the pelvis drifts backward toward the lower legs, most peopleâ??s instinct is to engage the buttocks to push it forward. This can draw the pelvis back more because the gluteus maximus is tilting it back and down. A more efficient but less obvious action is to engage the quadriceps, as illustrated here. This increases the angle between the thighs and lower legs and easily levers the pelvis forward. The cue for engaging the quadriceps is to press the tops of the feet into the floor as if trying to straighten the knees.

STEP 5 Contract the rhomboids to adduct the shoulder blades toward the midline, opening the chest upward. Then engage the pectoralis minor and serratus anterior and expand the ribcage. The cue for engaging the pectoralis minor is to constrain the scapulae backward in adduction against the spine, and then attempt to roll the shoulders forward. The shoulders will not move, so the force of the contraction is transmitted to the origin of the muscle on the ribcage, lifting it. To engage the serratus anterior, hold the scapulae in place and imagine pressing the hands outward against a door frame.

STEP 6 Finalize the pose by activating the rectus abdominis. This produces the abdominal â??airbagâ? • effect, wherein the increased intra-abdominal pressure supports the lumbar spine. The rectus abdominis also pulls upward on the pubic symphysis. This synergizes the action of the gluteus maximus in retroverting the pelvis, aiding to protect against lumbar hyperextension. Use the pubococcygeus and piriformis muscles to engage the mula bandha and nutate the sacrum. This aligns the sacrum with the iliac bones, helping to prevent hyperextension of the lumbar spine.

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